digidesign

ADAT® INTERFACE

USER'S GUIDE

Digidesign ADAT® Interface™ for Pro Tools™ version 3.1

User's Guide

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Keyword: *Digidesign*

Compuserve:
Go Digidesign

Digidesign ADAT Interface Serial Number:

digidesign

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PN 932003326 Rev.A April 1995

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For the best service, please have the following information ready before calling: 1. Computer System software version 2. Relevant Digidesign software version 3. Digidesign hardware configuration 4. Hard disk mechanism model number and firmware revision

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Hours: Monday through Friday — 9:30am - 5:30pm GMT

Digidesign is made up of people who are very interested in audio and the recording process as a whole. Become one of our registered owners and participate in the creative process.

Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

If necessary, consult an experienced radio/television technician for additional suggestions. The following booklet prepared by the Federal Communications Commision may also be helpful: "How to Identify and Resolve Radio-TV Interference Problems." The booklet is available from the US Government Printing Office, Washington, DC 20402 Stock No. 004-000-00345-4.

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Chapter A
An Introduction to the Digidesign ADAT Interface

An Introduction to the Digidesign ADAT Interface

Introduction

Thank you for purchasing the Digidesign ADAT Interface. The Digidesign ADAT Interface allows you to fully combine the convenience of eight-channel tape-based digital audio with all the advantages of a disk-based digital audio workstation. With its controls incorporated into the Pro Tools software, you can record, edit, and mix tracks to and from Pro Tools and the Alesis ADAT® completely in the digital domain.

The Digidesign ADAT Interface provides up to 8 simultaneous channels of digital audio input and output between Pro Tools and your ADAT, machine control with sample-accurate playback for up to 16 ADATs, 8-channel digital backup of Pro Tools audio files, and the ability to integrate up to 8 "live" synchronized ADAT tracks into your Pro Tools/TDM environment.

The Digidesign ADAT Interface integrates easily into your existing Pro Tools setup. Once installed, it will form a complete system comprised of three major components:

- Your Pro Tools hardware and software
- The Digidesign ADAT Interface itself, the digital "bridge" between Pro Tools and your ADAT
- Your Alesis ADAT(s) or Fostex RD-8 (single-machine only)

Note: If you have not yet installed Pro Tools, you should do so now. You should be familiar with the operation of Pro Tools and your ADAT before you begin installing the Digidesign ADAT Interface.

About This Manual

This manual explains in detail everything you need to know in order to successfully integrate your Digidesign ADAT Interface and up to sixteen ADATs into a Pro Tools system. This manual assumes you have a basic working knowledge of the Macintosh® computer and its operating conventions. You should know how to use a mouse, how to click and drag, and how to use standard menus, commands, and dialog boxes to open, save, and close files. In addition, you should have a basic working knowledge of your ADAT, how to format tapes, how to record and play back audio, and other fundamental ADAT functions.

To get the most out of your combined Pro Tools/ADAT configuration, you should also have a good working knowledge of the Pro Tools software before you begin using it with the Digidesign ADAT Interface. Your Pro Tools system MUST be installed correctly before you begin the ADAT Interface installation.

System Requirements

To use the Digidesign ADAT Interface with Pro Tools, your system requires:

- A Pro Tools III Core System, Pro Tools 442 Core System (Pro Tools I-series system). Pro Tools I-series systems with 8-, 12-, or 16-channels require the TDM option for use with the ADAT Interface.
- Version 3.0 or higher of the Pro Tools software.
- One of the following Digidesign Audio Interfaces: 888 I/O, 882 I/O, 442 I/O (Pro Tools I-series Audio Interface).
- A MIDI Interface with at least one input and one output available
- One or more (up to sixteen) Alesis compatible ADATs. Your ADAT(s) must be equipped with ADAT firmware version 4.0 or higher. †

† If your ADAT is equipped with a version of firmware lower than 4.0, you will need an update from Alesis or your Alesis dealer in order to use it with the Digidesign ADAT Interface. To check your ADAT's firmware version, turn on your Alesis ADAT and while

holding down the *Set Locate* button, press the *Fast-Forward* button. The firmware version number will be displayed in the transport counter area. For further information about ADAT firmware updates, please contact Alesis or your Alesis dealer.

- If you are using a Fostex RD-8, your RD-8 must be equipped with RD-8 Sync and Main firmware versions listed in the *Read Me* file on your Pro Tools disk. ††

†† If your RD-8 is equipped with versions of Sync and Main firmware lower than the versions listed in the Pro Tools *Read Me* file, you will need an update from Fostex or your Fostex dealer in order to use it with the Digidesign ADAT Interface. To check your RD-8's firmware versions, turn on your Fostex RD-8, scroll through the front panel *Main Menu* display to the *Version* submenu page, and the firmware version numbers will be displayed in the front panel area. For further information about RD-8 firmware updates, please contact Fostex or your Fostex dealer.

- An external mixing console and monitoring system (amplifier, speakers, headphones, etc.).

Combining Hard Disk Recording with Tape-based Recording

Hard disk recording systems and tape-based recording systems are two very different mediums. Tape recorders, even *digital* tape recorders such as the Alesis ADAT, are a *linear* recording medium. Linear recording is done in a line, from the beginning to the end of a tape. To record or play the magnetic signals that make up the sound data on a tape, a tape recorder has to physically move the tape across its tape heads. In order to hear a specific portion of a song recorded on tape, you have to rewind or fast forward the tape to that location, and then begin playback.

Hard disk recording is far more versatile. It's not a linear medium, but a *random-access* medium. Sound data is stored on a hard disk. Hard disk recording, combined with multitrack digital audio software such as Pro Tools, provides instantaneous access to any location in a recording. This allows you to go to any spot in a piece of recorded material at random immediately—without having to rewind or fast forward to get there.

In addition, you can quickly and easily edit and rearrange your recordings. Pro Tools lets you try out a limitless number of variations of your recorded material without permanently altering the original recording. This ability is referred to as *nondestructive editing*, and it is one of the biggest advantages of Pro Tools. Unlike tape-based systems, you can always go back to your original recording without having lost any of your work.

There are many advantages to tape-based Modular Digital Multitrack systems (MDMs) such as the ADAT as well: the recording medium, S-VHS tape, is inexpensive and can hold up to 48 minutes of 8-track digital audio. In addition, the ADAT is small enough to be portable and it does not require a computer.

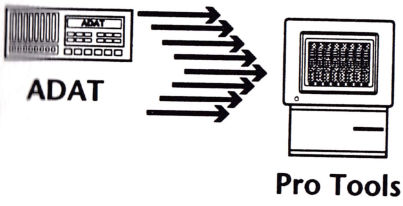
The benefit of the Digidesign ADAT Interface is that it allows you to combine Digidesign Pro Tools and the Alesis ADAT into one powerful integrated system. This combination lets you take advantage of the best features of both tape *and* disk-based digital audio systems.

Ways To Use Pro Tools and ADAT Together

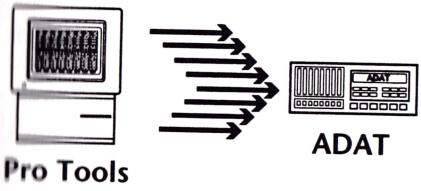
When you begin a project with Pro Tools, you create a "Session." When you create and save a Session, Pro Tools remembers exactly what soundfiles were associated with the Session, mixer settings, signal routing setup, EQ configuration, and other aspects of the Session. When you open a Session created earlier, the Session appears exactly as it was saved, and the associated soundfiles and settings are loaded automatically. With the Digidesign ADAT Interface, your Pro Tools Sessions can include ADAT tracks in addition to the disk files used with a conventional Session. You may have one or more ADAT cassettes that belong to a particular project. Once your system is set up correctly (as described in this manual) you can control Pro Tools and your ADAT(s) as one integrated system.

There are many ways of using the Digidesign ADAT Interface with your Pro Tools and ADAT. A few examples are listed below.

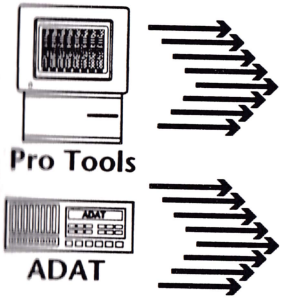
Ways in which you can use your Pro Tools/ADAT system:



Digitally record up to eight channels simultaneously from an ADAT into Pro Tools to edit tracks.



Digitally record up to eight channels simultaneously from Pro Tools to an ADAT to bounce down without taking up disk space, to backup your Pro Tools tracks, or to transfer them to another Pro Tools/ADAT system via inexpensive S-VHS tape.



Synchronize playback between Pro Tools and your ADAT to mix 8 "live" off-tape tracks into the Pro Tools III/TDM mixing environment for volume and pan automation or effects processing. You can also synchronize your Pro Tools/ADAT tracks with MIDI tracks from within Pro Tools or a Macintosh MIDI sequencer.

Conclusion

You should now understand how you can use the Digidesign ADAT Interface with Pro Tools. As you begin actually working with it, no doubt you will also discover unique ways of using this flexible system to your own advantage. Proceed to the next chapter and learn how to install your Digidesign ADAT Interface.

Chapter B
Installing the Digidesign ADAT Interface Hardware and Software

Installing the Digidesign ADAT Interface Hardware and Software

Introduction

In this chapter you'll learn how to install your Digidesign ADAT Interface for Pro Tools. To ensure a successful installation, follow the instructions in this chapter carefully. The installation process, which should take you about 15 minutes to complete, includes the following steps:

- Connecting the Digidesign ADAT Interface to your Pro Tools hardware
- Connecting the ADAT Digital Interface to your ADAT
- Connecting the Digidesign ADAT Interface to your MIDI Interface
- Connecting the Digidesign ADAT Interface to a SMPTE Slave Driver and Video Slave Driver (Optional)
- Configuring OMS for the Digidesign ADAT Interface and the SMPTE Slave Driver (Optional)
- Installing the software

Before you jump straight into setting up your system, you may want to quickly ready through the next few sections so that you'll have a good understanding of what the installation procedure entails.

Before You Begin

The Digidesign ADAT Interface requires you to have a working Pro Tools system. Before going any further with this installation, be sure that your Pro Tools system is properly installed and configured according to your Pro Tools User's Guide.

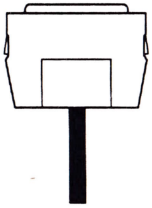
If you are installing the Digidesign ADAT Interface in an expanded Pro Tools system, it is important that you install the cards for your Pro Tools system in the correct order. Correct slot order is essential for your Pro Tools system to correctly "clock" the data passing through your system. Refer to your *Pro Tools User's Guide Addendum* for further information.

Before connecting any of your equipment power everything down. Making connections while power is on can cause damage to your system. Once connected, your Pro Tools/ ADAT system must be turned on according to a very specific sequence.

Carefully unpack the Digidesign ADAT Interface. Once that's done, it is important that you position your Digidesign ADAT Interface in proximity to both your ADAT and your Pro Tools Audio Interface so that all cables can be connected easily. You may rack mount the unit, or place it on a flat surface in your work space. Depending on your particular setup, you may want to make cable connections before you secure the Digidesign ADAT Interface in your rack. The Digidesign ADAT Interface takes up 1 space on a standard 19" rack.

The following cables are provided with your Digidesign ADAT Interface and Pro Tools ADAT Interface Accessory Kit:

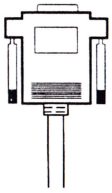
- 1 AC power cable
- 2 50-pin interface cables
- 2 BNC cables
- 1 fiber optic cable
- Two 9-pin sync cables
- 2 MIDI cables



50-pin interface

BNC

fiber optic



9-pin

MIDI

If you intend to use more than one ADAT with your Digidesign ADAT Interface, you will need to provide 1 additional fiber optic cable and 1 additional 9-pin sync cable for each ADAT you will be using.

About the Digidesign ADAT Interface

The Digidesign ADAT Interface is a sample-accurate, 8-channel digital "bridge" between Pro Tools systems and an Alesis ADAT.

The following sections describe what you'll find on the front and back panels of the Digidesign ADAT Interface. You'll learn how to install and connect your system later in this chapter.

The Front Panel

The front panel on the Digidesign ADAT Interface

1. Power Switch

This switch applies power to the Digidesign ADAT Interface. The "**I**" position is on. The "**O**" position is off.

NOTE: You must turn on your ADAT(s), your Digidesign ADAT Interface, and Audio Interface in a specific order. This required power-up sequence is outlined in detail in Chapter C. Do NOT attempt to turn your equipment on prior to reading Chapter C.

2. Power LED

This green LED illuminates whenever the Digidesign ADAT Interface is turned on.

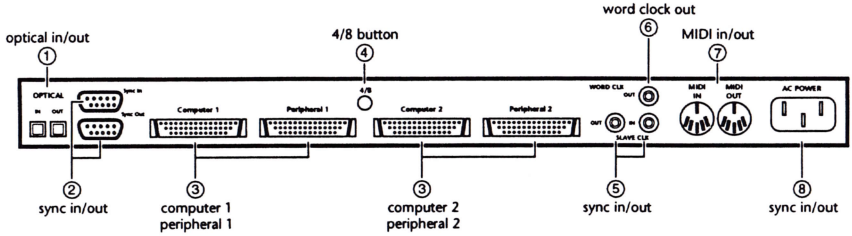
3. Online LED

This yellow LED illuminates whenever an ADAT is *on-line* with Pro Tools. This is the standard setting when you are using the Digidesign ADAT Interface with Pro Tools. If no ADAT is detected, or if you intentionally take the ADAT *off-line*, this LED will not illuminate.

4. Lock LED

This green LED flashes whenever Pro Tools is attempting to synchronize with an ADAT and illuminates once the two are locked.

The Back Panel



The back panel of the Digidesign ADAT Interface

1. Optical In/Out

These are fiber optic ports for Alesis proprietary digital optical audio input and output connections designed to send and receive digital audio to and from Alesis-compatible ADATs.

2. Sync In/Out

These 9-pin serial ports are for Alesis-proprietary sync input and output connections which are designed to exchange timing and machine control messages between the Digidesign ADAT Interface and Alesis-compatible ADATs.

3. Computer 1 & Peripheral 1, Computer 2 & Peripheral 2

These 50-pin ports are used to make connections between the Digidesign ADAT Interface and Pro Tools Audio Interfaces and Pro Tools NuBus cards. If you have a Pro Tools III system, *Computer 1* should be connected to a Digidesign Disk I/O card (or in a Pro Tools 442 system, a 442 card*), and *Peripheral 1* should be connected to your Pro Tools Audio Interface.

If you have a Pro Tools I-series system with 8-, 12-, or 16-channels, *Computer 1* must be connected to a the first Pro Tools 442 Audio Card* in the system, and *Peripheral 1* must be connected to your first Pro Tools Audio Interface. You will also need to connect *Computer 2* and *Peripheral 2* to the second Pro Tools NuBus card and interface. The Digidesign ADAT Interface will not function only when connected to the first two NuBus cards/interfaces.

Note: In this manual you will see reference to the "442 Card." This is the new name given to the original Pro Tools I-series Audio Card.

4. 4/8 Button

The position of this button indicates to your Digidesign ADAT Interface whether you are using a 4- or 8-channel Audio Interface.

5. Slave Clock In/Out

The *Slave Clock In* jack is a standard BNC type connector designed to receive a *Slave Clock Out* signal from a Pro Tools Audio Interface in order to synchronize the sample clock of the Digidesign ADAT Interface. The *Slave Clock Out* jack (tallest of the three BNC jacks on the back) outputs a 256x sample rate "Super Clock" clock signal.

6. Word Clock Out

The *Word Clock Out* jack is a standard BNC type connector that outputs a 1x sample rate Word Clock signal.

7. MIDI In/Out

The *MIDI In* and *MIDI Out* ports connect the Digidesign ADAT Interface to a standard MIDI Interface, and carry MIDI system exclusive messages between Pro Tools and the Digidesign ADAT Interface.

8. AC Power Input

This connector accepts a modular AC power cable. Because the Digidesign ADAT Interface is auto power selecting (100V-240V), it will automatically work with a standard modular cable when connected to AC power receptacles in any country.

Connecting the Digidesign ADAT Interface to Pro Tools

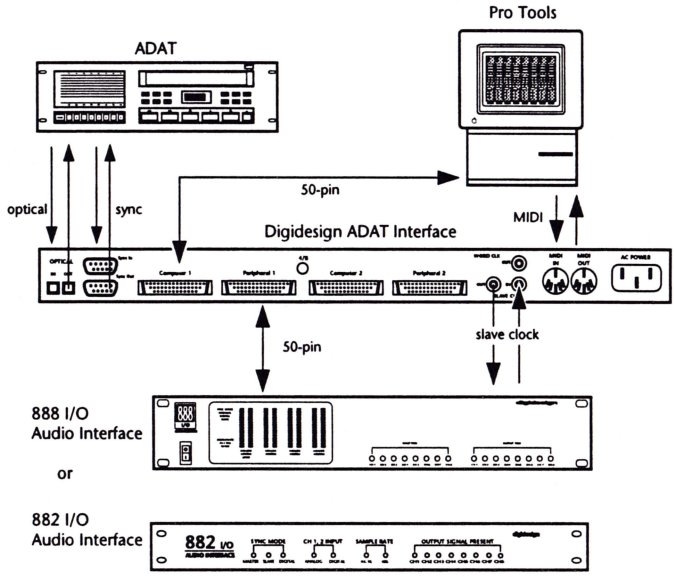
In this section you'll be shown how to connect your Digidesign ADAT Interface to your Pro Tools hardware. The instructions for making these connections differ slightly depending on which Pro Tools Audio Interface you have, but the basic steps are similar:

- Configure the 4/8 switch on the Digidesign ADAT Interface for your particular audio interface
- Connect the Pro Tools Nubus card to the Digidesign ADAT Interface
- Connect your Audio Interface(s) to the Digidesign ADAT Interface
- Make the appropriate Slave Clock connections between your Audio Interface and the Digidesign Audio Interface

If you have the 888 I/O or the 882 I/O Audio Interface, refer to the next section. If you have the 442 I/O Audio Interface (the original Pro Tools 4-channel interface), skip to the section titled *Connecting the Digidesign ADAT Interface to the 442 I/O.*

Connections to Pro Tools III Systems

The following diagram shows connections for a Digidesign ADAT Interface and a Pro Tools III system with either the 888 I/O or 882 I/O Audio Interface:



The Digidesign ADAT Interface Configuration for Pro Tools

On the back panel of the Digidesign ADAT Interface is a button labeled *4/8*. The position of this button, *In* or *Out*, *must* be configured correctly for the type of Audio Interface being used. For an 888 I/O or 882 I/O Audio Interface, this button should be *In* (pushed in).

To configure the Digidesign ADAT Interface for use with an 888 I/O or 882 I/O Audio Interface:

- Depress the button labeled *4/8* on the back panel of the Digidesign ADAT Interface. The button should be pushed all the way in.

Next, you will need to make several connections between your Pro Tools and your Digidesign ADAT Interface. You will first make a connection from your Disk I/O card to the Digidesign ADAT Interface, placing the ADAT Interface "in-between" your Disk I/O Card and your 8-channel Audio Interface (the 888 I/O or 882 I/O) using the 50-pin interface cables.

Note: If you have an expanded *Pro Tools III system, you must attach the ADAT Interface to the first Disk I/O card in your Pro Tools III system. The ADAT Interface will not function properly if attached to a Bridge I/O card or to Expansion Kit Disk I/Os.*

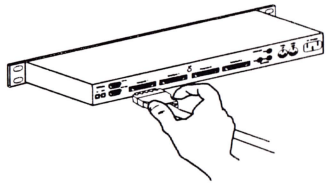
To connect your Pro Tools I/O card to the Digidesign ADAT Interface:

- Make sure your computer and audio interface are powered OFF.
- Disconnect the 50-pin interface cable from your Audio Interface by pinching the metal tabs on either side of the connector to release it from the interface port.

IMPORTANT

Never connect or disconnect the interface cable while the power is on. Doing so can cause permanent damage to the Pro Tools components, including your Digidesign ADAT Interface!

- Take the free end of the 50-pin interface cable (the one you just disconnected) and, pinching the metal tabs on either side of the 50-pin connector, push it into the 50-pin interface port labeled *Computer 1* on the Digidesign ADAT Interface. Release pressure on the tabs to lock the connector into place.



Connecting the Pro Tools I/O Card to the Digidesign ADAT Interface

Next you'll connect your Audio Interface to the ADAT Interface.

To Connect the Digidesign ADAT Interface to your Audio Interface 50-pin interface port:

- Use the short 50-pin interface cable that came with your Digidesign ADAT Interface to make a connection between the Digidesign ADAT Interface 50-pin interface port labeled *Peripheral 1* and your 888 I/O or 882 I/O's 50-pin interface port (labeled *Computer*). Remember to pinch and release the tabs on either side of the 50-pin connector to make a solid connection at each end.

Next, you'll make the necessary Slave Clock connections.

To Connect the Digidesign ADAT Interface to your Audio Interface *Slave Clock* jacks:

- Taking one of the BNC cables that came with your Digidesign ADAT Interface, make a connection between the *Slave Clock OUT* of Audio Interface and the *Slave Clock IN* of the Digidesign ADAT Interface. To lock the BNC connectors into place, twist the metal connector clockwise until you hear a click.
- Taking the second BNC cable, make a connection between the *Slave Clock IN* of your Audio Interface and the *Slave Clock OUT* of the Digidesign ADAT Interface. Lock the BNC connectors into place as described above. Daisy-chain any other audio interface peripherals you have connected. From the last Audio Interface, connect the *Slave Clock Out* to the ADAT Interface's *Slave Clock In.*

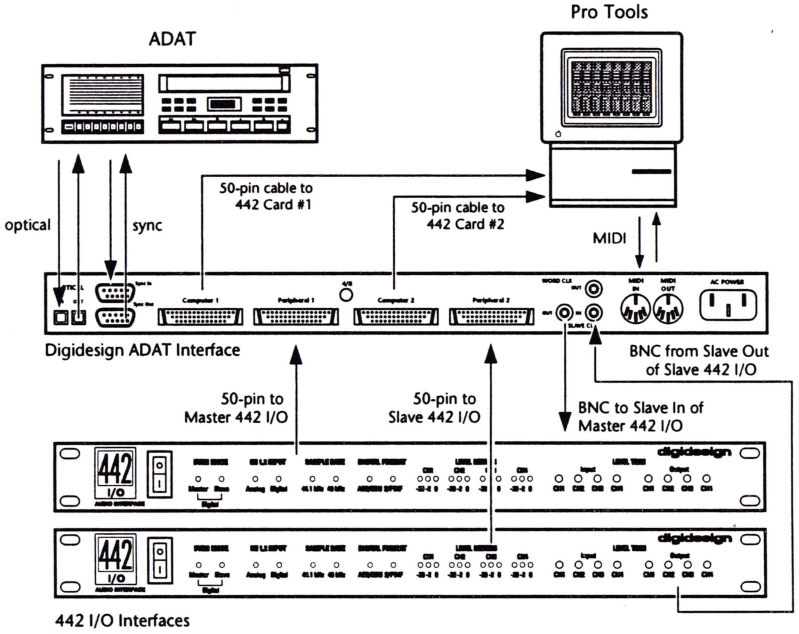
IMPORTANT

Make sure that your BNC cables are connected properly. If you can pull on the BNC cable and release the connector from the jack, it is not properly locked in place. If the BNC cable connector is not locked, the connection will be unreliable and your Digidesign ADAT Interface will not function properly.

You have now completed the connections between your Digidesign ADAT Interface and Pro Tools. Skip to the next section *Connecting the Digidesign ADAT Interface to your ADAT* later in this chapter.

Connecting the Digidesign ADAT Interface to a 442 I/O-based Pro Tools System

The following diagram shows how to connect the Digidesign ADAT Interface to your ADAT and a Pro Tools system that uses one or more 442 I/O Audio Interfaces:



Connecting the Digidesign ADAT Interface to a 442 I/O-based Pro Tools system

On the back panel of the Digidesign ADAT Interface is a button labeled *4/8*. The position of this button, *In* or Out, determines the type of Audio Interface being used with the Digidesign ADAT Interface. For a *single* Pro Tools 442 I/O configuration, this button should be *Out* (not pushed in). For an expanded (8- or more channels) Pro Tools I-series system, this button should be *In* (pushed in).

To configure the Digidesign ADAT Interface for use with a Pro Tools 442 system:

- Set the button labeled *4/8* on the back panel of the Digidesign ADAT Interface to the *4* (Out) position. The button should be all the way out when using a Pro Tools 442.

Next, you will make connections between Pro Tools and your Digidesign ADAT Interface. You will first make the connections from your Pro Tools 442 card to the Digidesign ADAT Interface. The instructions that follow apply to both Pro Tools 442 systems and expanded Pro Tools I-series systems with 8, 12, or 16 channels. If your Pro Tools system has only a single Audio Interface, ignore instructions that apply to making connections to a second Audio Interface. These apply only to expanded Pro Tools I-series systems. (If you have an expanded Pro Tools I-series system, you *must* use the first two audio cards/interfaces.)

To connect the Digidesign ADAT Interface to a Pro Tools 442 card:

- Make sure your computer and audio interface are powered OFF.
- Disconnect the 50-pin interface cable from your Audio Interface by pinching the metal tabs on either side of the connector and detaching it from the port. (If you have an expanded Pro Tools I-series system, disconnect the 50-pin interface cable from both Audio Interface A and B.)
- Take the free ends of the 50-pin interface cable (the one you just disconnected) and, pinching the metal tabs on either side of the 50-pin connector push it into the 50-pin interface port labeled *Computer 1* on the Digidesign ADAT Interface. Release pressure on the tabs to lock the connector into place. (If you have an expanded Pro Tools I-series system, connect Audio Interface A's interface cable to the 50-pin interface port labeled *Computer 1* on the Digidesign ADAT Interface, and Audio Interface B's interface cable to the 50-pin interface port labeled *Computer 2.)*

Next, connect your Audio Interfaces.

To Connect the Digidesign ADAT Interface to your Audio Interface:

- Use one of the short 50-pin interface cables that came with your Digidesign ADAT Interface to connect the Audio Interface's 50-pin interface port (labeled *Computer)* to the Digidesign ADAT Interface's 50-pin interface port (labeled *Peripheral 1).* (If you have an expanded Pro Tools I-series system, connect Audio

Interface A's interface port to *Peripheral 1* and connect Audio Interface B's interface port to *Peripheral 2.)*

Next, you will make Slave Clock connections between the devices in your system.

To connect the Digidesign ADAT Interface to a single 442 I/O

- Using one of the BNC cables that came with your Digidesign ADAT Interface, connect the Slave Clock OUT of the ADAT Interface to the Slave Clock IN of the Pro Tools Audio Interface. To lock the BNC connector into place, twist it clockwise until you hear a click.
- Next, connect the Slave Clock OUT of the Audio Interface to the Slave Clock IN of the ADAT Interface.

To connect the ADAT Interface to multiple 442 I/O Audio Interfaces (for expanded Pro Tools I-series systems):

- Using one of the BNC cables that came with your Digidesign ADAT Interface, connect the Slave Clock OUT of the ADAT Interface to the Slave Clock IN of Audio Interface A. To lock the BNC connector into place, twist it clockwise until you hear a click.
- Connect the Slave Clock OUT of Audio Interface A to the Slave Clock IN of Audio Interface B. (If you have more than two Audio Interfaces in your Pro Tools system, daisy-chain them in this way as well.)
- Connect the Slave Clock OUT of Audio Interface B to the Slave Clock IN of the Digidesign ADAT Interface. (If you have more than two Audio Interfaces in your system, connect the Slave Clock OUT of the *last* Audio Interface in the chain to the Slave Clock IN of the Digidesign ADAT Interface.)

IMPORTANT

If you can pull on the BNC cable and release the connector from the jack, it is not locked in place. If the BNC cable connector is not locked, the connection will be unreliable and your Digidesign ADAT Interface will not function properly.

You have now completed the connections between your Digidesign ADAT Interface and Pro Tools. Proceed to the next section *Connecting the Digidesign ADAT Interface to your ADAT.*

Connecting the Digidesign ADAT Interface to your ADAT

In this section you'll learn how to connect your ADAT(s) to your Digidesign ADAT Interface. You should have already connected your Digidesign ADAT Interface to your Pro Tools hardware as described in the previous section. If you have more than one ADAT, be sure to also read the section *Connecting to Multiple ADATs* on the next page after you have followed the instructions below.

There are two types of connections you must make between the Digidesign ADAT Interface and your ADAT — digital audio and digital sync. You'll use the fiber optic and 9-pin cables to make these connections.

A Note About Fiber Optic cables

As the name implies, fiber optic cables carry an optical signal. They have tiny lenses on the jacks that focus the signal. To protect the lens, they are packaged with a protective plastic tube on each end. Make sure you remove this tube before attempting to connect the cables. Once you have removed the tube, avoid touching the ends of the cable to prevent oils from your skin from getting on the lenses.

To connect digital audio between the Digidesign ADAT Interface and your ADAT:

- Using one of the fiber optic cables provided with your Digidesign ADAT Interface, connect the jack labeled *Optical Out* on your Digidesign ADAT Interface to the jack labeled *Digital Input* on your ADAT.
- Using the other fiber optic cables, connect the jack labeled *Optical In* on your Digidesign ADAT Interface to the jack labeled *Digital Output* on your ADAT.

NOTE: If you connect a fiber optic cable to the Optical Out of the Digidesign ADAT Interface while it is on, you will see a red light at the other end of the cable. This is not a LASER, and it won't damage your eyes.

To connect digital sync between the Digidesign ADAT Interface and your ADAT:

- Using one of the 9-pin connector cables that came with your Digidesign ADAT Interface, connect the jack labeled *Sync Out* on your Digidesign ADAT Interface to the jack labeled *Sync In* on your ADAT. To lock the connectors in place, tighten the screw-in knobs on either side of the connector.

- Using the other 9-pin connector cable that came with your Digidesign ADAT Interface, connect the jack labeled *Sync In on* your Digidesign ADAT Interface to the jack labeled *Sync Out* on your ADAT. To lock the connectors in place, tighten the screw-in knobs on either side of the connector.

IMPORTANT

If you can pull on the 9-pin connector and release the connector from the jack, it is not locked in place. If the 9-pin sync connector is not locked , the connection will be unreliable and your Digidesign ADAT Interface will not function properly.

Connecting to Multiple ADATs

If you have a multiple ADAT installation, *be sure that all machines contain version 4.00 firmware or higher and that the firmware version is the same for all of the ADATs.* To connect multiple ADATs, follow the instructions listed above, but daisy-chain the optical and 9-pin sync connectors from one ADAT to another, connecting the last ADAT in the chain back to the Digidesign ADAT Interface.

Note: If you are using a Fostex RD-8, the RD-8 cannot be used as the Master ADAT in a multiple ADAT system. If you are using both Fostex RD-8 and Alesis ADAT(s) in your system, the RD-8 must be slaved to an ADAT.

While Pro Tools can control up to 16 ADATs simultaneously with sample-accuracy, you can only address *ONE* of 16 ADATs at a time for recording or TDM mixing integration. You can choose which machine to address in the ADAT Window in Pro Tools, which will be covered shortly.

Connnecting the Digidesign ADAT Interface to SMPTE and Video Slave Drivers

In this section you'll learn how to configure the Slave Clock connections between the Digidesign ADAT Interface, Audio Interface(s) and the Digidesign SMPTE and Video Slave Drivers for resolving the ADAT and Pro Tools to external time code and clock sources.

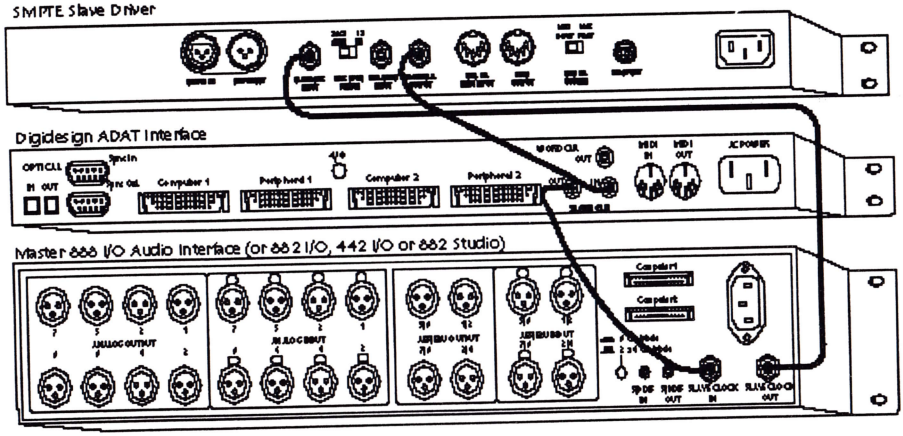
The diagrams on the following pages show the Slave Clock connections for use of the Digidesign ADAT Interface with the Digidesign SMPTE and Video Slave Drivers.

IMPORTANT

You'll be using BNC cables to make Slave Clock cable connections. These must be locked into place in order to operate. If you can pull on the BNC cable and release the connector from the jack, it is not locked in place. If the BNC cable connector is not locked, the connection will be unreliable and your Digidesign ADAT Interface or associated peripherals will not function properly.

To configure the Slave Clock connections for use of the ADAT Interface with a Digidesign SMPTE Slave Driver (for single Pro Tools Audio Card/Interface systems):

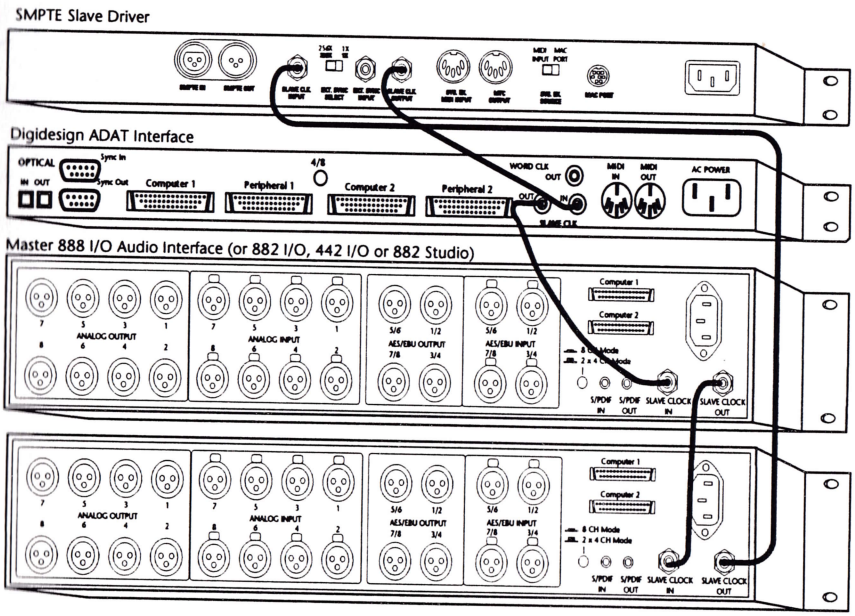
- Using one of the BNC cables that came with your Digidesign ADAT Interface Accessory Kit for Pro Tools, connect the *Slave Clock Out* of the ADAT Interface to the *Slave Clock In* of the Pro Tools Audio Interface. To lock the BNC connector into place, twist it clockwise until you hear a click.
- Connect the *Slave Clock Out* of the Audio Interface to the *Slave Clock In* of the Digidesign SMPTE Slave Driver. On the back panel of the SMPTE Slave Driver, select 256x for the *Ext. Sync Select* switch setting.
- Connect the *Slave Clock Out* of the Digidesign SMPTE Slave Driver to the Slave Clock In of the Digidesign ADAT Interface.



Slave Clock connections for the ADAT Interface for use with a Digidesign SMPTE Slave Driver (for single Pro Tools Audio Card/Interface systems)

To configure the Slave Clock connections for use of the ADAT Interface with a Digidesign SMPTE Slave Driver (for expanded Pro Tools systems):

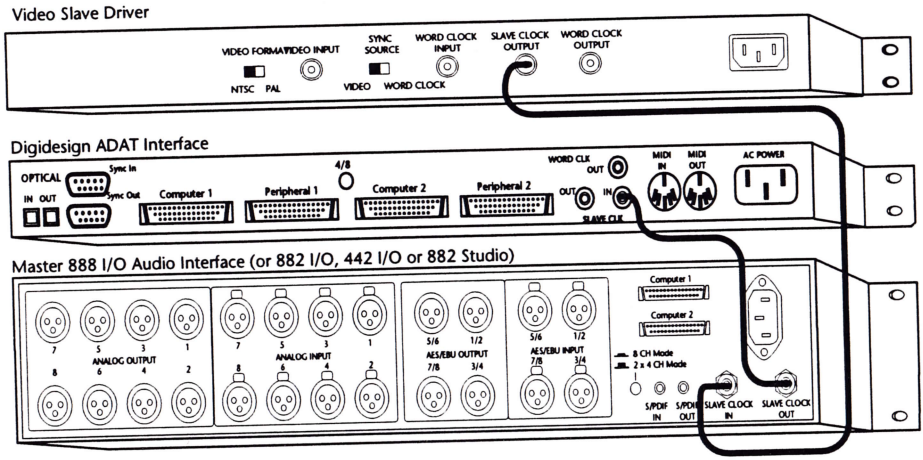
- Using one of the BNC cables that came with your Digidesign ADAT Interface Accessory Kit for Pro Tools, connect the *Slave Clock Out* of the ADAT Interface to the *Slave Clock In* of Audio Interface A. To lock the BNC connector into place, twist it clockwise until you hear a click.
- Connect the *Slave Clock Out* of Audio Interface A to the *Slave Clock In* of Audio Interface B. For additional Audio Interfaces in your Pro Tools system, daisy-chain them sequentially in this way as well.
- Connect the *Slave Clock Out* of the *last* Audio Interface in the chain to the *Slave Clock In* of the Digidesign SMPTE Slave Driver. On the back panel of the SMPTE Slave Driver, select 256x for the *Ext. Sync Select* switch setting.
- Connect the *Slave Clock Out* of the Digidesign SMPTE Slave Driver to the *Slave Clock In* of the Digidesign ADAT Interface.



Slave Clock connections for the ADAT Interface for use with a Digidesign SMPTE Slave Driver (for expanded Pro Tools systems)

To configure the Slave Clock connections for use of the ADAT Interface with a Digidesign Video Slave Driver (for single Pro Tools Audio Card/Interface systems):

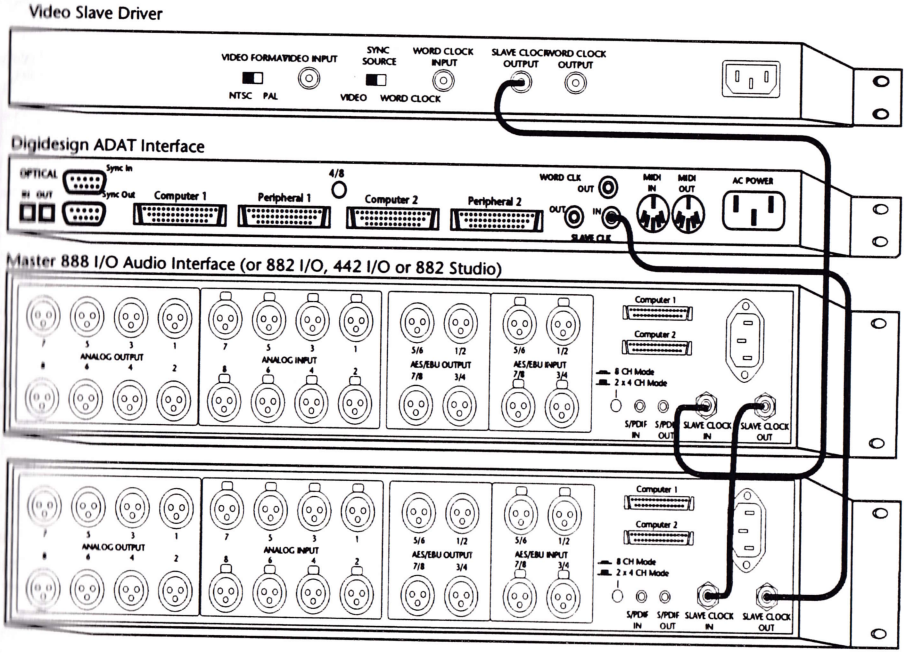
- Connect the *Slave Clock Out* of the Digidesign Video Slave Driver to the *Slave Clock In* of the Pro Tools Audio Interface. To lock the BNC connector into place, twist it clockwise until you hear a click.
- Connect the *Slave Clock Out* of the Audio Interface to the *Slave Clock In* of the Digidesign ADAT Interface. When using the ADAT Interface with the Video Slave Driver, the ADAT Interface will always be slaved to the Video Slave Driver. As the Video Slave Driver has no Slave Clock input, no further Slave Clock connections need to be made to the ADAT Interface.



Slave Clock connections for the ADAT Interface for use with a Digidesign Video Slave Driver (for single Pro Tools Audio Card/Interface systems)

To configure the Slave Clock connections for use of the ADAT Interface with a Digidesign Video Slave Driver (for expanded Pro Tools systems):

- Connect the *Slave Clock Out* of the Digidesign Video Slave Driver to the *Slave Clock In* of the Pro Tools Audio Interface A. To lock the BNC connector into place, twist it clockwise until you hear a click.
- Connect the *Slave Clock Out* of Audio Interface A to the *Slave Clock In* of Audio Interface B. For additional Audio Interfaces in your Pro Tools system, daisy-chain them sequentially in this way as well.
- Connect the *Slave Clock Out* of the *last* Audio Interface in the chain to the *Slave Clock In* of the Digidesign ADAT Interface. When using the ADAT Interface with the Video Slave Driver, the ADAT Interface will always be slaved to the Video Slave Driver. As the Video Slave Driver has no Slave Clock input, no further Slave Clock connections need to be made to the ADAT Interface.

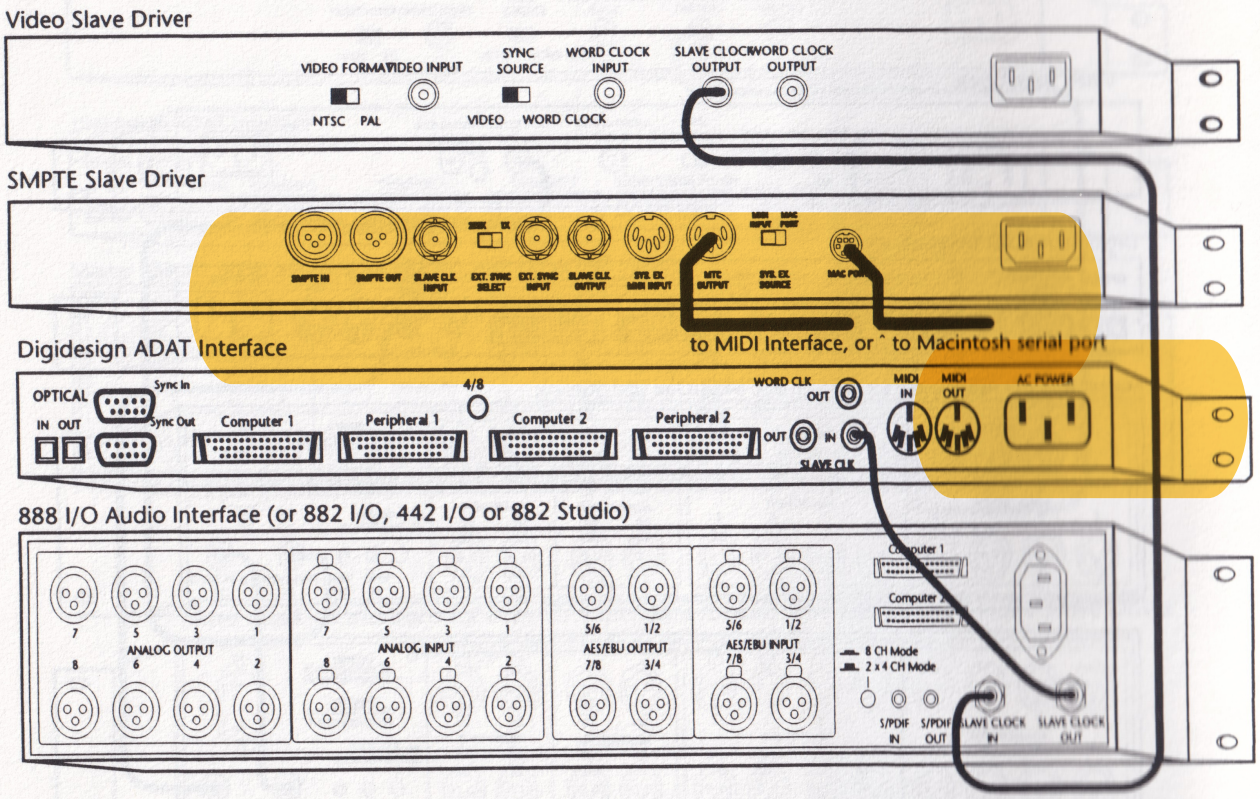


Slave Clock connections for the ADAT Interface for use with a Digidesign Video Slave Driver (for expanded Pro Tools systems)

Using the Digidesign ADAT Interface with both SMPTE and Video Slave Drivers

If you plan to use the Digidesign ADAT Interface with both SMPTE and Video Slave Drivers, configure the Slave Clock connections only for a Video Slave Driver.

Note: The SMPTE Slave Driver should NOT be part of the Slave Clock chain, since it cannot resolve to incoming time code and an external Slave Clock signal simultaneously. As a result, connect the Slave Clock cables as described in the "To configure the Slave Clock connections for use of the ADAT Interface with a Digidesign Video Slave Driver" section earlier in this manual. The SMPTE Slave Driver will not resolve your system, but will supply positional MIDI Time Code (MTC) information only. The Video Slave Driver will resolve the system to video sync or word clock.



Slave Clock connections for the ADAT Interface for use with both Video and SMPTE Slave Drivers

MIDI Connections

The final cable connections required by the Digidesign ADAT Interface are the MIDI connections. If you have not yet installed your MIDI interface, do so now before proceeding.

With the Digidesign ADAT Interface connected to Pro Tools, the Pro Tools software uses MIDI to communicate with your ADAT Interface via system exclusive messages. These messages are used to manipulate settings on the ADAT, and to link the transport functions of Pro Tools and your ADAT so that they will always play in perfect sync.

IMPORTANT

You must have MIDI Input and Output connected at all times or the Digidesign ADAT Interface will not function properly. If you are using MIDI for other applications, we highly recommend you purchase a multi-port MIDI interface.

To connect the Digidesign ADAT Interface to your MIDI Interface.

- Using one of the standard MIDI cables provided with your Digidesign ADAT Interface, connect the *MIDI Out* of the Digidesign ADAT Interface to an available input port on your MIDI interface.
- Using the other standard MIDI cable provided with your Digidesign ADAT Interface, connect the *MIDI In* of the Digidesign ADAT Interface to an available output port on your MIDI interface.

Note: If you use OMS, you must name and configure the MIDI port for your ADAT Interface in the OMS Setup application. To learn how to do this, proceed to the next section, "Using the Digidesign ADAT Interface with OMS."

IMPORTANT

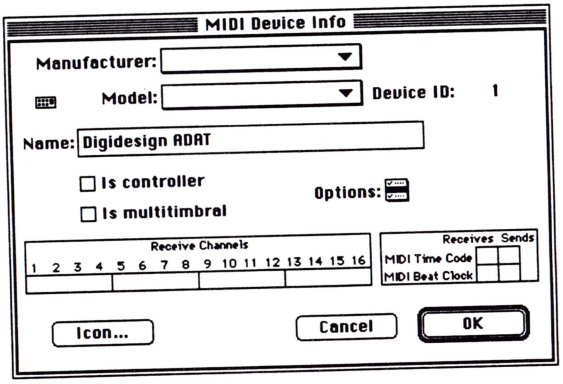
If you are using a multi-port MIDI interface with your system, DO NOT connect the ADAT interface in tandem with another MIDI device on the same port. This will cause Pro Tools to send standard MIDI data to the ADAT Interface and will result in system errors.

Using the Digidesign ADAT Interface with OMS

If you are using the Digidesign ADAT Interface with OMS, this section will show you how to define your ADAT Interface as a OMS device in the OMS Setup.

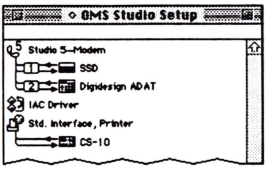
To define your ADAT Interface as a OMS device in the OMS Setup:

- In OMS Setup + Patches select *New Device* in the Studio menu.
- In the MIDI Device Info window, leave names for the Manufacturer and Model blank, and name the device Digidesign ADAT Interface. Uncheck Is Controller and Is Multitimbral, and leave items under Options unchecked. Then uncheck Receive Channels 1-16, and uncheck Receives and Sends for both MIDI Time Code and MIDI Beat Clock.
- Click *OK* to close the MIDI Device Info window, and save the changes to the OMS setup. (If Pro Tools is running, changes in OMS will not be recognized until *after* relaunching Pro Tools.)



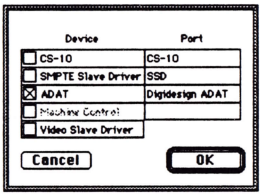
Defining the Digidesign ADAT Interface as an OMS Device

- In your current OMS Setup window, connect the Digidesign ADAT Interface to the correct port or MIDI interface. Click with the mouse and drag the Digidesign ADAT Interface icon over the icon for the desired port or MIDI interface, and release the mouse. Arrows connecting the ADAT Interface to and from the desired port or MIDI interface signifies a connection has been made.



Connecting the Digidesign ADAT Interface
to the correct port or MIDI interface in the OMS Setup window

- Launch Pro Tools. Select the *Peripherals* command from the Setups menu and click in the appropriate check box for the Digidesign ADAT Interface. Then, from the pop-up menu next to the Digidesign ADAT Interface in this dialog, select the MIDI port that you have designated to use for the ADAT Interface.



The Peripherals dialog, using OMS
(with OMS-defined "Digidesign ADAT" port)

If You Are Using the Digidesign SMPTE Slave Driver with OMS

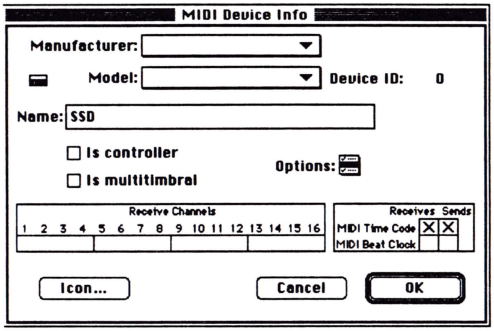
If you are using both ADAT Interface and Digidesign SMPTE Slave Driver with OMS, this section will show you how to define your SMPTE Slave Driver as an additional OMS device in the OMS Setup.

To define your SMPTE Slave Driver as a OMS device in the OMS Setup:

- In OMS Setup + Patches select *New Device* in the Studio menu.
- In the MIDI Device Info window, leave names for the Manufacturer and Model blank, and name the device SSD. Uncheck Is Controller and Is Multitimbral, and leave items under Options unchecked. Then uncheck Receive Channels 1-16, and uncheck Receives and Sends for MIDI Beat Clock. Then check Receives and Sends for MIDI Time Code.

- Click *OK* to close the MIDI Device Info window, and save the changes to the OMS setup. (If Pro Tools is running, changes in OMS will not be recognized until *after* relaunching Pro Tools.)

- If you are using both ADAT Interface and Digidesign SMPTE Slave Driver with OMS, you must also define your SMPTE Slave Driver as a OMS device in the OMS Setup. In OMS select *New Device* in the Studio menu. In the MIDI Device Info window, leave blank the Manufacturer and Model names, name the device SSD, uncheck Is Controller and Is Multitimbral, leave MIDI Machine Control unchecked under Options, uncheck Receive Channels 1-16, check both Receives and Sends MIDI Time Code, and uncheck Receives and Sends MIDI Beat Clock. Click *OK* to close the MIDI Device Info window, and save the changes to the OMS setup. (If Pro Tools is running, changes in OMS will not be recognized until *after* relaunching Pro Tools.)



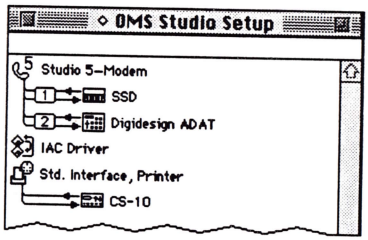
Defining the SMPTE Slave Driver as an OMS Device

- In your current OMS Setup window, connect the SMPTE Slave Driver to the correct port or MIDI interface. Click with the mouse and drag the SSD icon over the icon for the desired port or MIDI interface, and release the mouse. Arrows connecting the SSD to and from the desired port or MIDI interface signifies a connection has been made.

Important

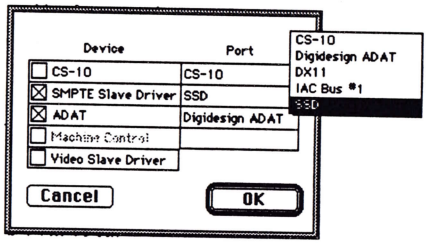
If you are connecting the SMPTE Slave Driver to the same MIDI Interface as your ADAT Interface, you *must* use a multi-port MIDI interface such as an Opcode Studio 5 or a Mark of the Unicorn (MOTU) MIDI Time Piece II. If the ADAT port is shared with another MIDI function such as time code, machine control, or metronome, your ADAT

Interface will not function properly. The System Exclusive (SysEx) stream between the ADAT Interface and Pro Tools should never be merged or interrupted with any other MIDI transmission.



Connecting the SMPTE Slave Driver to the correct port or MIDI interface in the OMS Setup window (Studio 5 shown in this example)

- Launch Pro Tools. Select the *Peripherals* command from the Setups menu and click in the appropriate check box for the SMPTE Slave Driver. Then, from the pop-up menu next to the SMPTE Slave Driver in this dialog, select the MIDI port that you wish to use. Do not select the same port used by your ADAT Interface for your SMPTE Slave Driver or any other MIDI device.



The Peripherals dialog, using OMS (with OMS-defined "SSD" and "Digidesign ADAT" ports)

Important

If the ADAT port is shared with another MIDI function such as time code, machine control, and metronome, your ADAT Interface will not function properly. The System Exclusive (SysEx) stream between the ADAT Interface and Pro Tools should never be merged or interrupted with any other MIDI transmission.

Software Installation

The software required to use the ADAT Interface is installed automatically as part of the *Easy Install* option for Pro Tools 3.0 or higher. Unless you deleted the files *ADATLink, Reset ADAT Interface* and their associated ReadMe files, no further software installation is required. Check your DAE folder to make sure it contains a folder titled "DAE Extensions," and that the *ADATLink* software is inside the DAE Extensions folder. Check also to make sure the ADAT Interface README file is in your Pro Tools folder. If any of these files are missing, read the instructions that follow to do a custom install of the ADAT Interface for Pro Tools software from your Pro Tools Install disk.

Read this section if you do in fact need to install the *ADATLink* DAE extension, the name of the software used by the ADAT Interface for Pro Tools. The ADATLink DAE extension requires version 3.0 or higher of the Pro Tools software. If you have not yet installed this version, do so now before continuing.

If you need to Install the ADATLink software on your computer:

- Insert the *Pro Tools 3.1 Install* disk into your Mac.
- Double-click the *Pro Tools Installer* application. When the program opens, click *OK* to continue.
- In the Installer dialog box, click *Custom Install.*
- From the list of custom install options, select *For ADAT Users.*
- Follow the on-screen instructions to complete the installation.
- When the installation procedure is finished, the Installer will let you restart your computer.

Your ADAT Link software installation is now complete. Here's a summary of what the installer puts on your computer, and where.

The following items are installed:

- A folder called *DAE Extensions* is created inside your DAE folder. (The DAE folder is created inside your System Folder when you install Pro Tools.)
- The *ADATLink* software is installed inside the *DAE Extensions* folder inside the DAE folder.
- The ADAT Interface *READ ME* text file is installed in your Pro Tools folder. Be sure to read this document as it contains important information regarding the use of the ADAT Interface with Pro Tools.
- The *Reset ADAT Interface* application is also installed in your Pro Tools Folder. Refer to the ADAT Interface *READ ME* for information on the Reset ADAT Interface utility.

Conclusion

This concludes the hardware and software installation process. You are now ready to proceed to the next chapter and get started with the Digidesign ADAT Interface and Pro Tools.

Chapter C
Getting Started

Chapter C
Getting Started

Getting Started

Introduction

In this chapter you will learn how to start up your Pro Tools system and the Digidesign ADAT Interface. You will first power up all of your system hardware using a specific power up procedure. You will then configure the Pro Tools application for use with the Digidesign ADAT Interface.

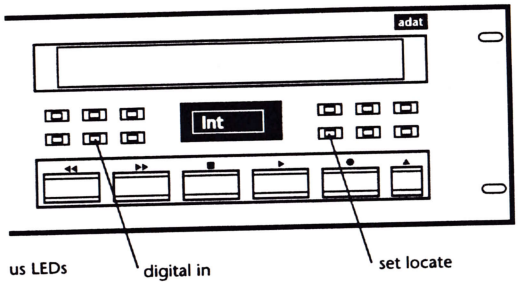
Before you proceed, you should have already completed the hardware and software installation described in Chapter B. If you haven't, please do so now before continuing. If at any point during the setup procedure your system does not appear to be working correctly, please consult the troubleshooting guide at the end of this chapter.

Powering Up Your System

In order to configure your system hardware properly, it is important that you follow a specific power up procedure each time you use Pro Tools. This procedure is detailed below:

To power up your system:

- Make sure your computer and peripherals are all OFF before beginning.
- Turn on your Pro Tools hard drive(s).
- Turn on your ADAT (if you have multiple ADATs, turn on the designated *Master* ADAT). Wait until the ADAT has completely started up.
- Set the ADAT Clock to *Internal*. (If you have multiple ADATs, set this on the Master ADAT). To do this, hold down the *Set Locate* button on the front of the ADAT and press the *Digital In* button until "INT" appears in the ADAT display.

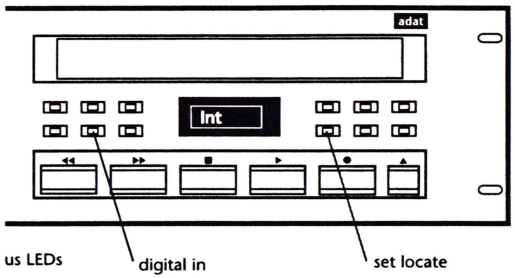


Setting the ADAT clock to Internal

- If you have a multiple ADAT configuration, turn on all other ADATs. If they a connected properly, all ADATs will display an ID number when they start up. The *Master* ADAT should display "ID 1".
- Insert an ADAT tape. If you have multiple ADATs, there must always be a tape in the master ADAT.
- Turn on the Digidesign Video and SMPTE Slave Drivers, if present..
- Turn on the Digidesign ADAT Interface.
- Turn on your Pro Tools Audio Interface(s)
- Turn on your Macintosh.
- Launch Pro Tools.

IMPORTANT

Since the Digidesign ADAT Interface is connected between the computer and your Pr Tools Audio Interface, it is imperative that you turn on your Digidesign ADAT Interfa whenever you use Pro Tools. If you do not, Pro Tools will not function. Although it i not required that you *use* your ADAT for every Pro Tools project, your ADAT and ADAT Interface should always be powered ON when using Pro Tools or any other application which uses your Digidesign audio hardware.



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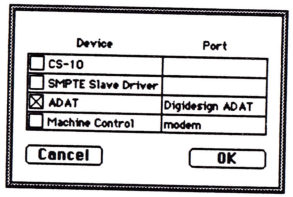
Configuring Pro Tools to Work with the ADAT Interface

Before you can start using your ADAT with Pro Tools, you must make a few settings in the Pro Tools software. These settings will enable Pro Tools to talk to your ADAT and to automatically find your ADAT whenever you launch the application.

To set up the Digidesign ADAT Interface in the Pro Tools application:

- Launch Pro Tools if it is not already running.
- Choose *Peripherals* from the Options menu. The following dialog appears.



The Peripherals dialog, using OMS (with an OMS-defined "Digidesign ADAT" port selected)

- Click in the box next to *ADAT* to place an X in the box.
- Indicate which serial port is being used for MIDI communication between your Macintosh and the Digidesign ADAT Interface. To do this, click and hold down the mouse button on the *Port* box next to the *ADAT* option in the Peripherals dialog to display a pop-up list of ports. Choose either *Modem* or *Printer*, whichever is appropriate.
- If you use OMS, this Ports list will also include all your defined MIDI devices and IAC (Inter-application Communication) ports. If the names of the ports on your MIDI Interface do not appear on the *Input* and *Output* lists, there may be a problem with your MIDI Interface setup. If you are using OMS, check your current OMS Setup to make sure you have defined a device for your Digidesign ADAT Interface. (Refer to the *Using the Digidesign ADAT Interface with OMS* section later in this chapter to learn how to do this.)
- If you are using a multi-port MIDI Interface, choose the port to which you've connected the ADAT Interface.

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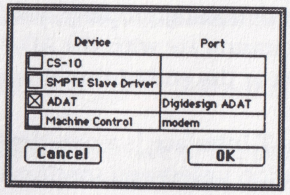

The Peripherals dialog, using OMS (with an OMS-defined "Digidesign ADAT" port selected)

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- If you are using a multi-port MIDI Interface, choose the port to which you've connected the ADAT Interface.

Important

Do not select your ADAT port for any other MIDI function (time code, machine control, metronome, etc.).

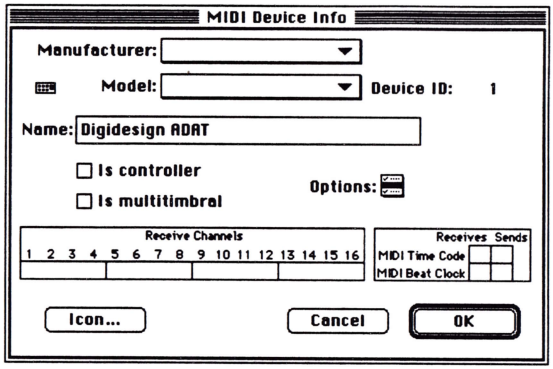
- Click *OK* to close this dialog.

Pro Tools will attempt to establish communication with the ADAT Interface via your MIDI interface. If everything is connected properly, the *Show ADAT Window* command in Pro Tools' Display menu should be available. On the front panel of your ADAT, the *Digital In* light will be illuminated. If there is a problem with your system connections, or something is not functioning properly, you'll get a message telling you that Pro Tools is unable to communicate with the ADAT. If you have problems, refer to the *Troubleshooting* section at the end of this chapter.

Configuring your ADAT Interface is a one-time operation. Pro Tools will remember your connection configuration unless you specifically change it or disconnect it.

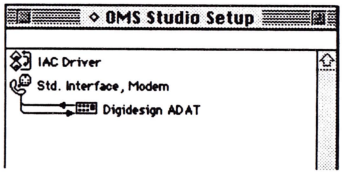
If You Are Using Digidesign ADAT Interface with OMS

- If you are using the Digidesign ADAT Interface with OMS, you must define your ADAT Interface as a OMS device in the OMS Setup. In OMS select *New Device* in the Studio menu. In the MIDI Device Info window, leave blank the Manufacturer and Model names, name the device Digidesign ADAT Interface, uncheck Is Controller and Is Multitimbral, leave items under Options unchecked, uncheck Receive Channels 1-16, and uncheck Receives and Sends for both MIDI Time Code and MIDI Beat Clock. Click *OK* to close the MIDI Device Info window, and save the changes to the OMS setup.



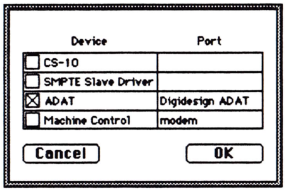
Defining the Digidesign ADAT Interface as an OMS Device

- Connect the Digidesign ADAT Interface to the correct port or MIDI interface in your current OMS Setup window. Click with the mouse and drag the Digidesign ADAT Interface icon over the icon for the desired port or MIDI interface, and release the mouse. Arrows connecting the SSD to and from the desired port or MIDI interface signifies a connection has been made.



Connecting the Digidesign ADAT Interface to the correct port or MIDI interface in the OMS Setup window

- Launch Pro Tools. Select the *Peripherals* command from the Setups menu and click in the appropriate checkbox for the Digidesign ADAT Interface. Then, from the pop-up menu next to the Digidesign ADAT Interface in this dialog, select the MIDI port that you wish to use.



The Peripherals dialog, using OMS (with an OMS-defined "Digidesign ADAT" port selected)

A Note About Sample Rates

When working with the ADAT Interface, keep in mind that most users of ADATs will have recorded their tapes at the ADAT's default sample rate of 48 kHz. When you choose 44.1 kHz as the sample rate for your "master" audio interface, the ADAT Interface should properly configure the ADAT for a 44.1 kHz rate by dropping the pitch (varispeeding). (This is how ADATs work at 44.1 kHz.)

Setting the Clock Master

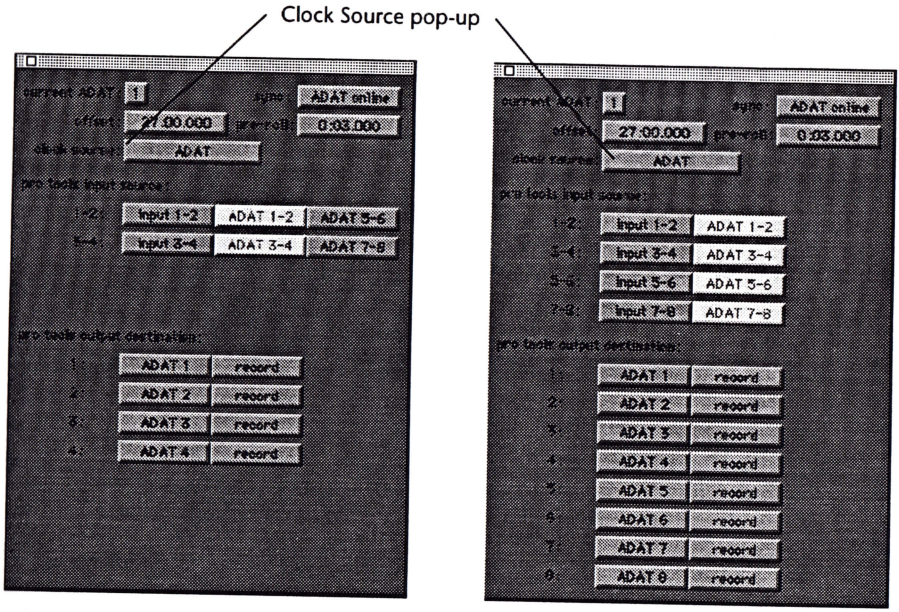
In a Pro Tools/ADAT system, the *Clock Master* is the device responsible for generating the master 256x audio sample rate "Super Clock" signal which synchronizes the sample clocks of Pro Tools and your ADAT. You can have either the ADAT or your Audio Interface serve as clock master by selecting the desired device in Pro Tools' *ADAT Window*.

Choosing the Correct Clock Source

When transferring and syncing audio between Pro Tools and your ADAT, the *ADAT* should be the clock master. Conversely, you'll want the *Audio Interface* to be clock master if you are recording into Pro Tools' digital ports (AES/EBU or S/PDIF) from a DAT deck or other digital source. You can designate which device is the clock master in Pro Tools' *ADAT Window*.

To choose which device is the Clock Master for your system:

- Open the ADAT window by choosing *Show ADAT Window* from the Pro Tools' Display menu. The ADAT window appears:



The ADAT Window as it appears in a 4-channel Pro Tools system (left) and as it appears in an 8-channel Pro Tools III system (right)

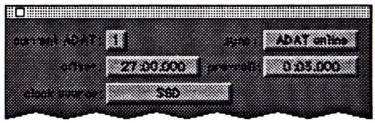
- From the *Clock Source* pop-up, make sure *ADAT* is selected as your clock master (this is the default setting). You'll use the ADAT as the clock master when transferring and syncing audio between Pro Tools and your ADAT(s). (Refer to the section entitled *A Guided Tour of the ADAT Window* for additional information on the Clock Source pop-up.)

You have now set the master clock source for your Pro Tools/ADAT system. The clock *frequency* is determined by your choice of *Sample Rate* in Pro Tool's *Hardware Setup* dialog, accessed via the Hardware Setup command in the Setup menu. See the previous section *About Sample Rates* for more information about clock frequency.

Selecting the SMPTE Slave Driver as Clock Source

Selecting the SMPTE Slave Driver and its port in Peripherals Setup configures the Pro Tools software to address a SMPTE Slave Driver in the system. To resolve the ADAT and Pro Tools to an external time code source, select the SMPTE Slave Driver as the Clock Source and the SMPTE Slave Driver will automatically be set to *Resolve* mode. When the SMPTE Slave Driver is connected but not used to resolve the system, it still must be

powered on and selected in the Peripherals setup. Selecting the ADAT or Audio Interface as the Clock Source will automatically set the SMPTE Slave Driver to *Generate from Slave* mode, so it can return the Slave Clock signal from the audio interface(s) back to the ADAT Interface.



The SMPTE Slave Driver (SSD) as Clock Master

Important

Remember to switch Pro Tools to *Internal* sync mode in the Hardware Setup window. No matter which Pro Tools configuration you have, the clock source should always be set to *Internal* unless you are recording from a DAT machine, or other device that outputs clock via S/PDIF. If you are not recording from a digital source such as a DAT machine, there is no reason to ever set the clock to *Digital.*

Note: Remember to set the Sample Rate switch of the SMPTE Slave Driver to match your Pro Tools Session sample rate, or audio will play back at the wrong pitch.

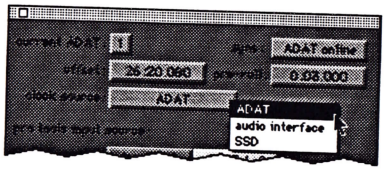
Clock Source selection with the Video Slave Driver

If you have configured a Video Slave Driver in the system and have checked it the Peripherals setup, *VSD* will automatically be the Clock Source setting in the ADAT Window. The Digidesign Audio Interface will always run as a *slaved* device to the Video Slave Driver or the Audio Interface. Even if you are recording into Pro Tools from the AES/EBU or S/PDIF digital inputs of your Audio Interface, the Clock Source will indicate *VSD*. However, Pro Tools will ignore the Video Slave Driver and instead listen to its digital inputs for sample rate clock source and pass it to the Digidesign ADAT Interface.

NOTE: If you plan to use the Digidesign ADAT Interface with both SMPTE and Video Slave Drivers, configure the Slave Clock connections for the Video Slave Driver. Connect the Slave Clock cables as in the "To configure the Slave Clock connections for use of the ADAT Interface with a Digidesign Video Slave Driver" section earlier in this manual. The SMPTE Slave Driver will be configured only for its Longitudinal SMPTE time code (LTC) to MIDI time Code (MTC) converting capabilities.

To change the Clock Source:

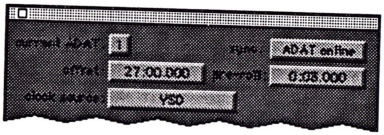
- Click on the *Clock Source* button to display the Clock Source pop-up.
- Choose the appropriate device. The master/slave lights on your Audio Interface will reflect your setting.



Selecting the Clock Source in the ADAT Window

Selecting the Video Slave Driver as Clock Source

Selecting the Video Slave Driver in Peripherals Setup configures the Pro Tools software so the ADAT Interface can address a Video Slave Driver in the system. The Video Slave Driver allows you to resolve the ADAT and Pro Tools to external clock sources such as *video sync (black burst)* and *word clock*. When using the Video Slave Driver with an ADAT Interface, the ADAT will *always* run as a slaved device. Selecting the Video Slave Driver in the Peripherals setup will change the Clock Source selection in the ADAT Window to remain fixed on "VSD." Even if you are recording into Pro Tools from the AES/EBU or S/PDIF digital inputs of your Audio Interface, the Clock Source will still indicate *VSD*. However, Pro Tools will ignore the Video Slave Driver and instead listen to its digital inputs for clock source and pass it to the Digidesign ADAT Interface.



The Video Slave Driver (VSD) as a Clock Master selection after "VSD" is checked in the ADAT Window

Note: Remember to set the Sample Rate switch on the front panel of the Video Slave Driver to match your Pro Tools Session sample rate, or audio will play back at the wrong pitch.

Note: In Generate from Slave mode, the SMPTE Slave Driver will not be able to resolve to incoming time code, which means it cannot be part of the Slave Clock chain when a Video Slave Driver is also connected.

Using the Transport Window

Before exploring audio transfer between Pro Tools and your ADAT, there are a few system basics that you should know. In this section, you'll learn how Pro Tools's Transport can be used to control your Pro Tools/ADAT system, toggling control between Pro Tools or your ADAT. You'll also learn how to put Pro Tools *on-line* to control both components as one system.

First, verify communication between Pro Tools and your ADAT. In the process, you'll learn how to toggle the Transport control between Pro Tools and your ADAT. This feature lets you control your ADAT off-line via Pro Tools' Transport Window.

Off-line Playback

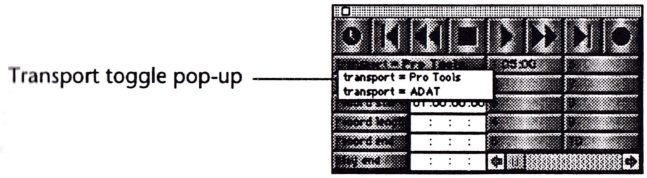
There may be times when you may not want to synchronize Pro Tools with your ADAT, but you want to listen to one or the other. The solution is to take Pro Tools *off-line.* When Pro Tools is off-line, you can play a Pro Tools session without having to wait for the ADAT to cue up and sync to Pro Tools. Likewise, you can play and record on your ADAT using the Pro Tools Transport Window as your "remote control" without the limitations of the Pro Tools session boundaries.

To play back Pro Tools independent of your ADAT:

- Make sure the *Online* button on the Pro Tools Transport is off (not highlighted). The *Online* LED on the front panel of your Digidesign ADAT Interface should be off.
- Click the *Play* button in Pro Tools, or press the Space bar. Pro Tools will play back normally.

To play back your ADAT independently of Pro Tools:

- Make sure the *Online* button on the Pro Tools Transport is off (not highlighted). The *Online* LED on the front panel of your Digidesign ADAT Interface should be off.
- Click the area labeled *Transport* = (directly below the on-line button) to display the transport toggle pop-up, as shown in the illustration below, and select *Transport = ADAT.* You can also press Command-[(left bracket) to toggle between Pro Tools and ADAT transport.



- With a formatted tape in your ADAT, press any of Pro Tools' Transport buttons to control your ADAT. (Don't worry about record-enabling ADAT tracks — this will be explained later in the section entitled *Recording from Pro Tools to ADAT.*)

If your ADAT doesn't seem to be responding, check your MIDI and Sync connections, and check your settings in the *Peripherals* dialog to make sure you have enabled your ADAT and chosen the correct MIDI port for it.

Keyboard Shortcuts for Cueing your ADAT to Pro Tools

When the ADAT is the transport master, there are also keyboard shortcuts provided for cueing your ADAT to the start and end of Pro Tools on-screen selections or pre- and post-roll locations.

To cue up ADAT to Pro Tools:

- Make sure *Transport = ADAT* is selected.
- To cue ADAT to the beginning of a Pro Tools selection (or the current insertion point), press Command-Left Arrow. To cue ADAT to the end of a Pro Tools selection, press Command-Right Arrow.
- To cue ADAT to Pro Tools' pre-roll point, press Option-Left Arrow. To cue ADAT to Pro Tools' post-roll point, press Command-Right Arrow.

Putting Pro Tools On-line with an ADAT

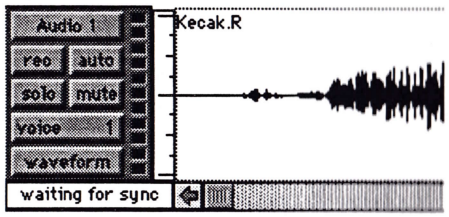
In the previous section you learned how Pro Tools' Transport can be toggled to act as a remote transport controller for your ADAT. However, the most significant advantage of the ADAT Interface is that it allows you to synchronize Pro Tools with your ADAT, controlling them both as one completely integrated system. This is done simply by putting Pro Tools *on-line*. All recording and synchronizing between Pro Tools and your ADAT(s) is done while Pro Tools is on-line . Recording and synchronizing are explained in detail in chapters D and E.

IMPORTANT

It is recommended to never exit Pro Tools (via the Application menu or by clicking another application's window, etc.) while on-line.

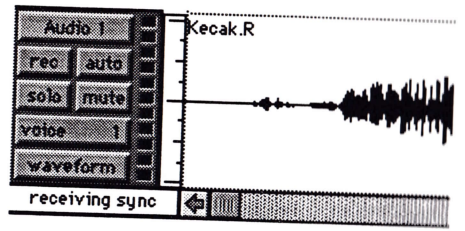
To synchronize Pro Tools and ADAT playback from Pro Tools' Transport:

- Make sure *ADAT online* is chosen in the Sync menu pop-up in the ADAT Window.
- Put Pro Tools on-line. There are four ways to do this: click the *On-line* button in Pro Tools Transport; choose *Online* from the Options menu; press Command-J; or hold down the Option key and press the Space bar. The On-line button on the Transport will flash, and the Status Display in the lower-left corner of the Edit window will read *Waiting for Sync* .



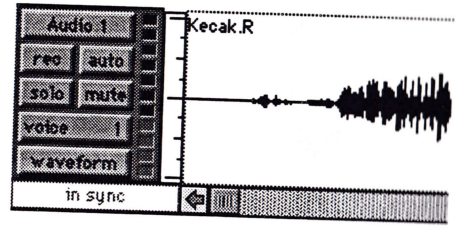
The Status Display in the lower left-hand corner of the Edit Window as it appears when the ADAT is placed on-line

- Click the *Play* button. The ADAT will locate to the position of Pro Tools' on-screen selection/insertion point (plus pre-roll) while the Status Display in the lower-left corner of the Edit window reads *Receiving Sync*.



The Status Display in the lower left-hand corner of the Edi as it appears when the ADAT is on-line and the Transport is

The ADAT will then begin playing back in sync with you and the Status Display in the lower-left corner of the Edi *Sync* . Click the *Stop* button to stop playback.



The Status Display in the lower left-hand corner of the Edit as it appears when ADAT and Pro Tools play/record together

Note: Clicking the Transport's Record button when on-line will arm bot ADAT, regardless of which is the Transport master.

ADAT as Master

When on-line, toggling the transport control between Pro Tools ar also toggle their master/slave relationship. In other words, with AD master and Pro Tools on-line, Pro Tools will chase and lock to the the ADAT instead of the ADAT chasing and locking to the current the Pro Tools Session. In this scenario, you can use either the on-sc buttons or the ADAT's transport controls.

If everything seems to be working correctly, proceed to the next se guided tour of all the other controls in the ADAT window. If you a difficulty with something, refer to the *Troubleshooting* section at the en

Putting Pro Tools On-line with an ADAT

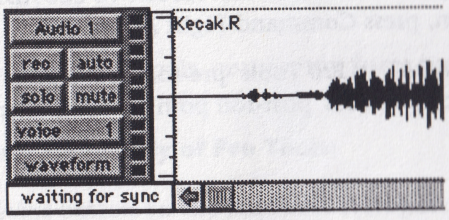
In the previous section you learned how Pro Tools' Transport can be toggled to act as a remote transport controller for your ADAT. However, the most significant advantage of the ADAT Interface is that it allows you to synchronize Pro Tools with your ADAT, controlling them both as one completely integrated system. This is done simply by putting Pro Tools *on-line*. All recording and synchronizing between Pro Tools and your ADAT(s) is done while Pro Tools is on-line . Recording and synchronizing are explained in detail in chapters D and E.

IMPORTANT

It is recommended to never exit Pro Tools (via the Application menu or by clicking another application's window, etc.) while on-line.

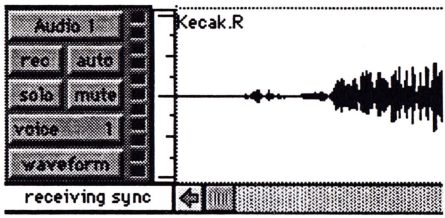
To synchronize Pro Tools and ADAT playback from Pro Tools' Transport:

- Make sure *ADAT online* is chosen in the Sync menu pop-up in the ADAT Window.
- Put Pro Tools on-line. There are four ways to do this: click the *On-line* button in Pro Tools Transport; choose *Online* from the Options menu; press Command-J; or hold down the Option key and press the Space bar. The On-line button on the Transport will flash, and the Status Display in the lower-left corner of the Edit window will read *Waiting for Sync* .



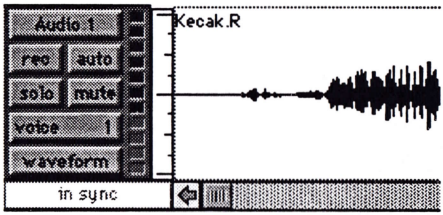
The Status Display in the lower left-hand corner of the Edit Window as it appears when the ADAT is placed on-line

- Click the *Play* button. The ADAT will locate to the position of Pro Tools' on-screen selection/insertion point (plus pre-roll) while the Status Display in the lower-left corner of the Edit window reads *Receiving Sync.*



The Status Display in the lower left-hand corner of the Edit Window as it appears when the ADAT is on-line and the Transport is engaged

The ADAT will then begin playing back in sync with your Pro Tools session, and the Status Display in the lower-left corner of the Edit window will read *In Sync* . Click the *Stop* button to stop playback.



The Status Display in the lower left-hand corner of the Edit Window as it appears when ADAT and Pro Tools play/record together in sync

Note: Clicking the Transport's Record button when on-line will arm both Pro Tools and your ADAT, regardless of which is the Transport master.

ADAT as Master

When on-line, toggling the transport control between Pro Tools and your ADAT will also toggle their master/slave relationship. In other words, with ADAT as Transport master and Pro Tools on-line, Pro Tools will chase and lock to the current location of the ADAT instead of the ADAT chasing and locking to the current location/selection in the Pro Tools Session. In this scenario, you can use either the on-screen Transport buttons or the ADAT's transport controls.

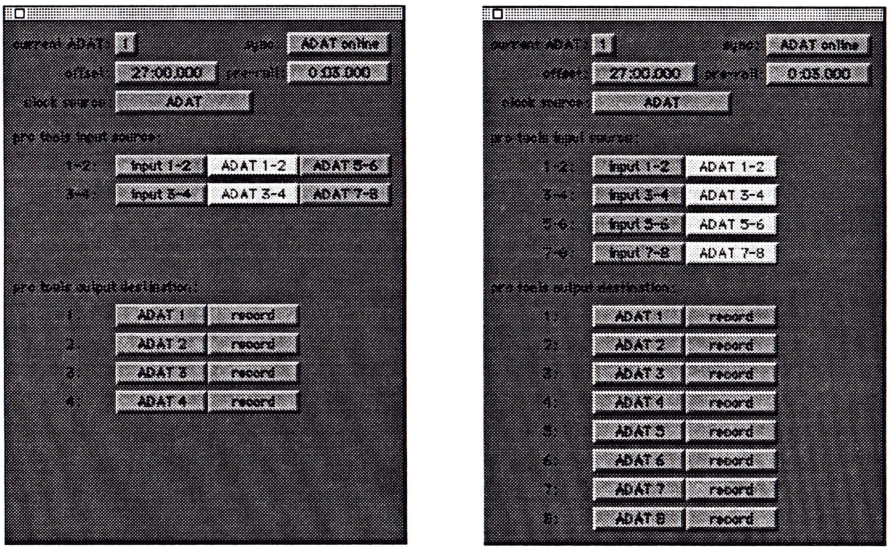
If everything seems to be working correctly, proceed to the next section for a quick guided tour of all the other controls in the ADAT window. If you are experiencing difficulty with something, refer to the *Troubleshooting* section at the end of this chapter.

A Guided Tour of the ADAT Window

In addition to providing controls for choosing the *Clock Source*, the ADAT Window provides controls for configuring ADAT tape offset, pre-roll, and input/output source/destination routing between Pro Tools and any of your ADATs. This section explains all the features and functions of the ADAT window that you'll use in a Pro Tools/ADAT Session.

To open the ADAT Window:

- Choose *Show ADAT Window* from the *Display* menu. The ADAT window appears:



The ADAT Window as it appears in a 4-channel Pro Tools system (left) and as it appears in an 8-channel Pro Tools III system (right)

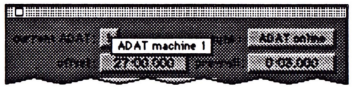
On the following pages are explanations of each of the controls in the ADAT window:

Current ADAT

The *Current ADAT* pop-up allows you to choose which ADAT (out of a maximum of 16) you wish to address for digital transfer. The number displayed in the *Current ADAT* field represents the ADAT currently set up to exchange digital audio with Pro Tools. The number of choices available depends on how many ADATs are connected. Pro Tools can exchange 8 channels of digital audio simultaneously from a single ADAT at one time.

To choose an ADAT with the *Current ADAT* pop-up:

- Click and hold on the *Current ADAT* field to display the *Current ADAT* pop-up:



The ADAT Window's "Current ADAT" pop-up as it appears in a single-ADAT system

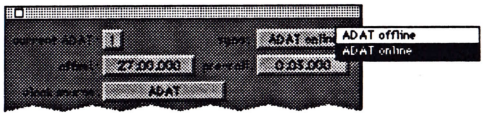
- Select the ADAT that you wish to use. Your master ADAT will be listed as *ADAT machine 1*. Slave ADATs will be numbered according to their ADAT ID number. The *Current ADAT* field will display the new ADAT (ID) number, and the *Digital In* button on the corresponding ADAT will illuminate. If the correct number of ADAT do not appear in the list, refer to the Troubleshooting section at the end of this chapter.

Sync

The *Sync* pop-up allows you to take an ADAT off-line independently of Pro Tools when synchronizing to external time code. This is handy for synchronizing Pro Tools to a time code source without having the ADAT cue and chase along, thereby saving time and reducing the wear on the ADAT transport controls and on the ADAT tape itself. In order to put Pro Tools on-line along with the your ADAT(s), *ADAT online* must be selected in this pop-up.

To take the ADAT on-/off-line:

- Click and hold on the *Sync* field to display the *Sync* pop-up:



The ADAT Offline/Online pop-up menu

- Select the appropriate setting.

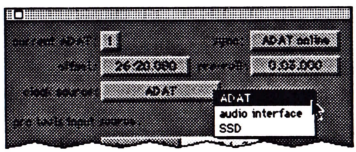
Note: In order to put Pro Tools on-line along with the your ADAT(s), ADAT online must be selected in this pop-up.

Clock Source

As described previously, the *Clock Source* pop-up allows you to choose the device (ADAT, Pro Tools Audio Interface, Video Slave Driver, or SMPTE Slave Driver) responsible for generating the 256x "super-clock" signal which synchronizes the sample clocks of Pro Tools and your ADAT. This should be set to *ADAT* for most Pro Tools/ADAT sessions. Choose *Audio Interface* only if recording into Pro Tools from the AES/EBU or S/PDIF digital inputs of your Audio Interface (you'll need to do this when recording from a DAT deck or other digital source). Conversely, selecting Digital Sync Mode in the Hardware Setup window automatically toggles the Clock Source in the ADAT Window to *Audio Interface*. Depending on whether you have a Video or SMPTE Slave Driver, choose the appropriate device if your are resolving to external time code and clock sources.

To change the Clock Source:

- Click on the *Clock Source* button to display the Clock Source pop-up:



The Clock Source pop-up

- Choose the appropriate device. The master/slave lights on your Audio Interface will reflect your setting.

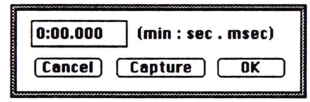
NOTE: When using your Pro Tools Audio Interface as clock master to record into the digital inputs of your Audio Interface, be sure to set Pro Tools' Sync mode and Channel Input Format(s) accordingly. Conversely selecting Digital Sync Mode in the Hardware Setup window automatically toggles the Clock Source in the ADAT Window to Audio Interface. (Refer to your Pro Tools User's Guide for instructions on configuring Pro Tools for digital input.)

Offset

The *Offset* button allows you to enter an offset between the Pro Tools Session and the ADAT tape location. The value displayed in the Offset field designates the start time of the ADAT whenever you synchronize playback with a Pro Tools Session. This is useful if you have audio that begins in the middle of an ADAT tape and you want to synchronize it with the beginning of a Session. You can enter an offset manually, or automatically "capture" the current ADAT time as your offset value.

To set an ADAT offset:

- Click on the *Offset* button. The ADAT Offset dialog appears:



The ADAT Offset dialog box

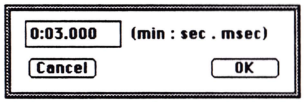
- Enter an offset by typing directly into the offset field. Offset is displayed in minutes:seconds:milliseconds. You do not need to type the colons which separate the time units — Pro Tools enters these automatically.
- As an alternative, clicking on the *Capture* button will enter the current ADAT location as the offset value. You can do this while ADAT playback is stopped, but the ADAT's heads must be *engaged* (you can tell if the ADAT's heads are engaged by looking at the *Stop* button on the ADAT—if it is flashing, the heads are NOT engaged. To engage its tape heads, press the Stop button on your master ADAT.)
- Click *OK* to save the offset amount. Click *Cancel* to close the Pre-roll dialog without saving any changes.

Pre-roll

The ADAT window *Pre-roll* button lets you set the amount of time the ADAT will roll before the designated start point of your Session or selection. A pre-roll gives Pro Tools a chance to lock to your ADAT before playback begins, ensuring that you won't miss any audio at the beginning of your Session/selection. The default setting is 3 seconds, though some systems may require more pre-roll time to properly lock.

To enter an amount of pre-roll:

- Click on the *Pre-roll* button. The ADAT Pre-roll dialog appears:



The ADAT Pre-roll dialog box

- Enter an amount of pre-roll and click *OK*. Click *Cancel* to close the Pre-roll dialog without saving any changes.

Pro Tools Input Source

The *Pro Tools Input Source* buttons are used to select input sources for Pro Tools input pairs. This is where you will route ADAT tracks to Pro Tools inputs. Refer to Chapter D, *Recording* for instructions on how to use these buttons.

Pro Tools Output Destination

The *Pro Tools Output Destination* buttons allow you to choose and record-enable ADAT destination tracks for any of the first 8 outputs of your Pro Tools III system. (Or the first 4 outputs if you have a Pro Tools 442 [Pro Tools I-series system]). Refer to Chapter D, *Recording* for instructions on how to use the Pro Tools Output Destination buttons.

Chapter D
Recording

Recording

Introduction

In this chapter you'll learn various recording techniques that can be used with the Digidesign ADAT Interface and Pro Tools. The following topics will be discussed:

- Recording ADAT tracks into Pro Tools
- Using the ADAT analog inputs to record audio into Pro Tools
- Recording Pro Tools tracks to ADAT tracks
- Using the analog or digital inputs in Pro Tools to record audio to an ADAT

Before Getting Started

Prepare Your Tapes

If you plan to do any recording from Pro Tools to one or more ADATs, make sure that you have an ADAT formatted S-VHS cassette prepared for each ADAT in the system (see your ADAT Reference Manual for specific instructions). Because this can be time consuming, it is a good idea to allow plenty of time for formatting before you begin recording with your ADAT.

Working with Multiple ADATs

Although the Digidesign ADAT Interface allows you to address only a single ADAT for digital audio transfer, you can still synchronize up to 16 ADATs with your Pro Tools Sessions. If you have connected your ADATs to each other using the procedures described in Chapter B, all of your ADATs will in play in perfect sync with the *Master* ADAT whenever it plays back or records. The software will always exchange timing information with the *Master* ADAT but you must use the *Current ADAT* pop-up (described in Chapter C) to determine which ADAT will exchange digital audio with your Pro Tools system.

Note: The Digidesign ADAT Interface supports the use of a single Fostex RD-8 digital tape recorder. In a multiple ADAT system the RD-8 cannot be used as the Master ADAT. If you are using both Fostex RD-8 and Alesis ADAT(s) in your system, the RD-8 must be slaved to an ADAT.

IMPORTANT:

In this chapter, whenever you are instructed to push a button on your ADAT, users with multiple ADATs should perform the action on the *Master* ADAT.

Recording from an ADAT to Pro Tools

You can digitally record from 1 to 8 ADAT tracks from the same ADAT into a new or existing Pro Tools Session. In this section you'll learn how a basic ADAT-to-Pro Tools audio transfer works.

Setting up an ADAT-to-Pro Tools transfer is simple. First, you'll create and configure destination tracks in Pro Tools for your ADAT tracks in Pro Tools' Edit or Mix window. Then you'll route ADAT tracks to the Pro Tools inputs assigned to each destination track via Pro Tools' ADAT window.

With formatted tapes cued up in your ADAT, you should be ready to go.

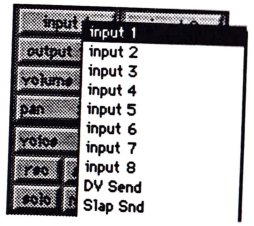
To record ADAT tracks into Pro Tools:

- In Pro Tools, configure the session ADAT parameters as described in Chapter C (i.e., Current ADAT, Clock Source, Offset, Pre-roll, etc.) from within the ADAT Window.
- In TDM-equipped systems, configure Pro Tools' monitoring mode by selecting *Auto Input Monitor* or *Input Only Monitor* from the Options menu. Refer to your Pro Tools III User's Guide for a review of these options if necessary.

Note: Use Input Only Monitor *if you wish to listen to incoming material on record-enabled Pro Tools/TDM tracks when playing back without actually recording. Remember to switch to* Auto Input Monitor *to hear playback of your newly-recorded tracks when finished.*

- Create destination audio track(s) in Pro Tools' Mix window for the ADAT track(s) you want to transfer. Make sure all the destination tracks have different voice assignments in the Pro Tools Session.

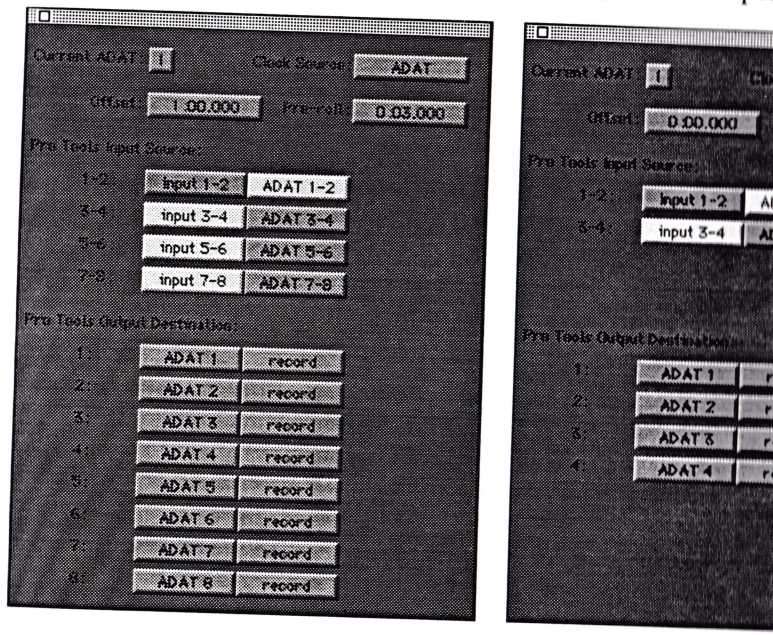
- Use the *Input Selector* of each destination track to assign its correspond to inputs on your master peripheral — 888 I/O 442 I/O A and/or B in a Pro Tools I-series system).



Assigning the input of a destination track

Remember which input you assign, as you'll route your AD these Pro Tools inputs via the ADAT window next.

- Choose *Show ADAT Window* from the Display menu to ope



The ADAT window in an 8 channel system (left) and a 4 channel system ADAT tracks 1 and 2 routed to Pro Tools' inputs 1 and 2

Note: The Digidesign ADAT Interface supports the use of a single Fostex RD-8 digital tape recorder. In a multiple ADAT system the RD-8 cannot be used as the Master ADAT. If you are using both Fostex RD-8 and Alesis ADAT(s) in your system, the RD-8 must be slaved to an ADAT.

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With formatted tapes cued up in your ADAT, you should be ready to go.

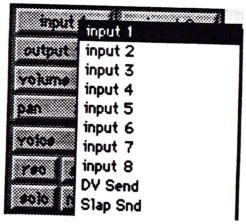
To record ADAT tracks into Pro Tools:

- In Pro Tools, configure the session ADAT parameters as described in Chapter C (i.e., Current ADAT, Clock Source, Offset, Pre-roll, etc.) from within the ADAT Window.
- In TDM-equipped systems, configure Pro Tools' monitoring mode by selecting *Auto Input Monitor* or *Input Only Monitor* from the Options menu. Refer to your Pro Tools III User's Guide for a review of these options if necessary.

Note: Use Input Only Monitor *if you wish to listen to incoming material on record-enabled Pro Tools/TDM tracks when playing back without actually recording. Remember to switch to* Auto Input Monitor *to hear playback of your newly-recorded tracks when finished.*

- Create destination audio track(s) in Pro Tools' Mix window for the ADAT track(s) you want to transfer. Make sure all the destination tracks have different voice assignments in the Pro Tools Session.

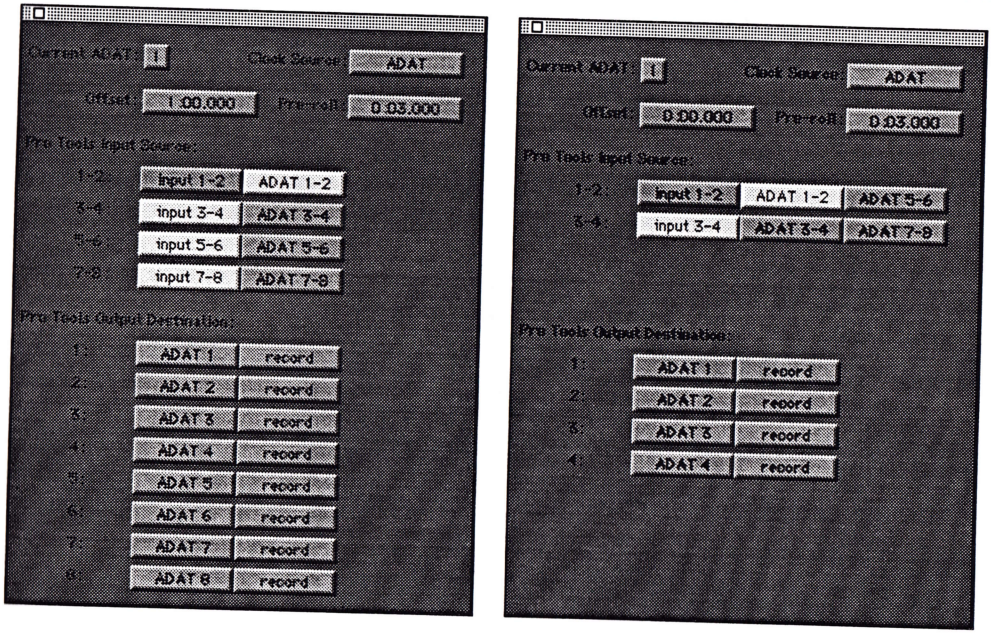
- Use the *Input Selector* of each destination track to assign its input (these should correspond to inputs on your master peripheral — 888 I/O or 882 I/O, or 442 I/O A and/or B in a Pro Tools I-series system).



Assigning the input of a destination track

Remember which input you assign, as you'll route your ADAT track pairs to these Pro Tools inputs via the ADAT window next.

- Choose *Show ADAT Window* from the Display menu to open the ADAT window.



The ADAT window in an 8 channel system (left) and a 4 channel system (right) with ADAT tracks 1 and 2 routed to Pro Tools' inputs 1 and 2

- Now use the *Pro Tools Input Source* buttons to route ADAT tracks to the inputs you assigned to your Pro Tools destination tracks (the tracks you created and configured in the previous steps). Click the button corresponding to the ADAT tracks you want to transfer in the right-most column of the *Pro Tools Input Source* section. In the example shown above, ADAT tracks 1 and 2 are routed to Pro Tools' inputs 1 and 2, while the remaining Pro Tools' inputs are still configured for input from your Audio Interface. To route additional ADAT tracks into Pro Tools, click the appropriate ADAT track buttons. (Remember, first you create new audio tracks in Pro Tools and assign their inputs using the *Input Selector* pop-up, then you open the ADAT window and switch the source of those inputs between audio interface inputs and ADAT tracks.)

- In the Mix window, record-enable your destination tracks.

Now you're ready to record.

To Record from an ADAT to Pro Tools:

- Make sure *Transport = Pro Tools* is selected (press Command-[(Left bracket) to toggle transport control).

- Put Pro Tools on-line.

- Click the *Record* Button on the Pro Tools Transport (press Command-Option-J to put Pro Tools on-line and arm it for recording in one step). The *Record* button will turn red and begin to flash.

Note: Clicking the Transport's Record button when on-line will arm both Pro Tools and your ADAT, regardless of which is the Transport master.

- Click the *Play* button in Pro Tools, or hit the Space bar on your keyboard.

The ADAT will cue up to the start time minus the amount of pre-roll you have designated in the ADAT window (in addition to any tape offset or Pro Tools pre-roll). Pro Tools' *Play* button will flash, and so will the Online LED on the Digidesign ADAT Interface. When the ADAT has cued up it will start to play, and Pro Tools will start to record from the on-screen insertion point. If you have an on-screen selection, *only* the on-screen selection will be recorded unless you have configured Pro Tools' Preferences to *Record On-line at Time Code Lock*. If this Preference is enabled, Pro Tools will continue recording regardless of selection boundaries. Refer to your Pro Tools III User's Guide for more information on this Preference option.

Note: If Transport=ADAT, Pro Tools will cue up to the ADAT start point and ignore any tape offset and/or Pro Tools pre-roll.

You can stop recording at any time.

To stop the recording:

- Click the *Stop* button in Pro Tools (or press the Space bar on your keyboard), or press Stop on your ADAT.

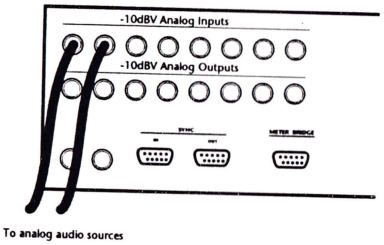
You've now recorded tracks from your ADAT into Pro Tools. You can just as easily route "live" audio from the ADAT's analog inputs into Pro Tools. The next section will show you how to do this.

Recording from ADAT Analog Inputs Into Pro Tools

Depending on your setup, you may find it convenient to record directly into Pro Tools from audio sources that are connected to the Analog Inputs of an ADAT (using the ADAT's Analog-to-Digital Converters). Using the following method you can play an audio source through your ADAT and record it digitally onto your hard disk.

To route audio from ADAT Analog Inputs into Pro Tools:

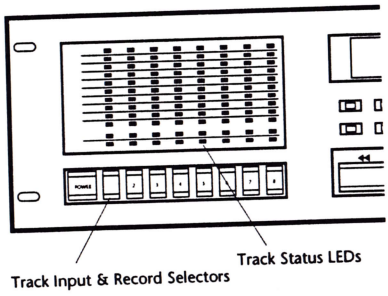
- Connect an audio source into one of the Analog Input jacks on the back panel of your ADAT.



Connecting an audio source to an ADAT

- If you have more than one ADAT, use the *Current ADAT* pop-up in Pro Tools' ADAT window to choose the ADAT your analog sources are connected to.
- On the front panel of the current ADAT, press the *Digital In* button to turn it *OFF* (it will be illuminated on the "current" ADAT).

- On the front of your ADAT, press the Track Select buttons that correspond to the inputs you connected. The corresponding Record & Input Status LEDs will flash red.



The ADAT Track Select Buttons and Status LEDs

- Configure Pro Tools as if you were transferring ADAT tracks as described in the previous section *Recording from an ADAT into Pro Tools* (i.e., create destination tracks and select inputs, configure Pro Tools Input Source in the ADAT window). Also, configure Pro Tools' input monitoring mode as desired (refer to your *Pro Tools III User's Guide* for information on the use of Auto Input Monitor versus Input Only Monitor modes).
- Make sure *Transport = Pro Tools* is selected (press Command-[(Left bracket) to toggle transport control).
- Record-enable the Pro Tools track(s).
- Make sure Pro Tools is *off-line*.
- Click the *Record* Button on the Pro Tools Transport. The *Record* button will turn red and begin to flash.
- Click the *Play* button in Pro Tools, or hit the Space bar on your keyboard. Pro Tools will begin recording.
- Play your audio sources that are connected to the ADAT Analog Inputs.

When you are done recording, click the *Stop* button in Pro Tools, or hit the Space bar on your keyboard. You've now recorded from your ADAT Analog Inputs into Pro Tools. Keep in mind that because the ADAT has no attenuation controls, you must control your audio input level at the source — an instrument preamp, mixing console, etc.

Recording Pro Tools Tracks to Your ADAT

This section of your User's Guide explains how to record Pro Tools tracks to your ADAT. You can digitally record up to 8 group output mixes (4 output groups in a Pro Tools 442 system) to a single ADAT from an open Session in Pro Tools, transfer individual Pro Tools tracks to individual ADAT tracks, or bus multiple tracks together to bounce a stereo or mono mix to your ADAT. This is accomplished by simply assigning the appropriate Pro Tools outputs to specific ADAT tracks using the *Pro Tools Output Destination* buttons of the ADAT window.

Important

About Record Monitoring

If you simultaneously monitor the outputs of your ADAT(s) and Pro Tools, be sure to mute one or the other when transferring audio from Pro Tools to the ADAT to avoid double-monitoring. Double-monitoring will not be phase-coherent (although the data recorded on your ADAT will be sample-accurate). The use of TDM connections can also compromise phase-coherency. For additional information about maintaining phase-coherency, refer to the section Delay in DSP Mixing in your *Pro Tools III User's Guide.*

To set up your ADAT to record from Pro Tools:

- Insert the tape you wish to record to into your ADAT.

Note: Before recording to your ADAT from Pro Tools, you should be aware that the ADAT will always impose a very short fade-in when recording. While this mandatory fade-in is less than 8 milliseconds, it can be enough to audibly alter the amplitude of the start of the material being transferred. If your Pro Tools Session material has absolutley no silence before audio begins (i.e., the first syllable of dialog or the first attack of a drum intro begin precisely at 00:00:00:00) you may notice the effect of this fade-in on the initial amplitude of your material.

Note: Pro Tools' QuickPunch feature applies only to Pro Tools audio tracks and does not perform punch-on-the-fly with the ADAT. For accurate ADAT record start times, use Pro Tools' standard auto-punch for punching in at selection in/out points. With Pro Tools as the Transport master, the ADAT will start recording from the insertion point or on-screen selection.

IMPORTANT

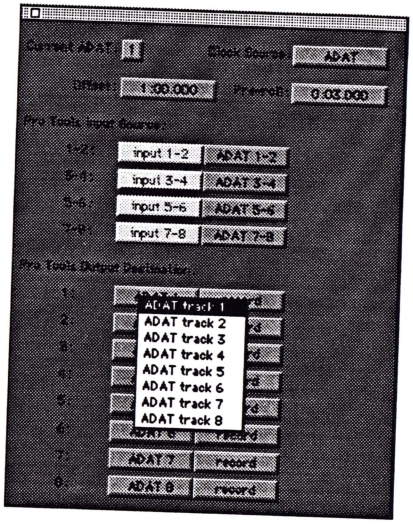
The native sample rate of the Alesis ADAT is 48 kHz. Other sample rates may be achieved by changing the playback speed of the ADAT. If your session sample rate is 44.1 kHz, the Pro Tools software will send a vari-speed message to the ADAT to tell it to slow down the playback speed. Because playback speed is slowed down on the ADAT, the time display on the front of the ADAT will not match the time displayed in Pro Tools when you synchronize playback between the two.

If you are using a Fostex RD-8 and the session sample rate is 44.1 kHz, the time display on the front of a Fostex RD-8 will also not match the time displayed in Pro Tools. Even though the Fostex RD-8 has native sample rates at both 44.1 kHz and 48 kHz, the Pro Tools software still implements the ADAT Interface to synchronize with an Alesis ADAT. Regardless of whether you are using an Alesis ADAT or a Fostex RD-8 or whether your session sample rate is 44.1 kHz or 48 kHz, the Offset in the Pro Tools ADAT Window will always refer to the same spot on the tape.

Your ADAT should be ready to go. Next, prepare Pro Tools.

To prepare Pro Tools to record to an ADAT:

- If you have more than one ADAT, use the *Current ADAT* pop-up on the ADAT Window to choose the ADAT you wish to record to.
- Set the Pro Tools tracks you wish to send, or multiple tracks that you wish to bounce, to output destinations (outputs 1 through 8 or mixer output pairs in Pro Tools III/TDM systems, or outputs 1 through 4 of interfaces A and/or B in a Pro Tools 442 system).
- In the ADAT Window, use the *Pro Tools Output Destination* buttons to route Pro Tools outputs (numbered consecutively down the left side) to ADAT Tracks. For each Pro Tools output that you plan on using, click the *ADAT* button next to it to display the ADAT Track pop-up:

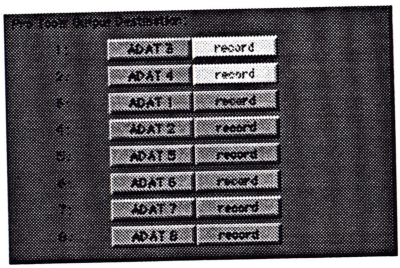


Routing a Pro Tools output to an ADAT Track

Important

Record-enabled ADAT tracks must *NOT* be configured as *Pro Tools Input Source* inputs or a feedback loop will occur.

- From the appropriate ADAT Track pop-up, select the destination track on your ADAT. (In the example above, an ADAT Track destination is being selected for Pro Tools Output 1.)
- Record-enable the ADAT destination tracks you have selected by clicking the appropriate *Record* button for each track. The button will turn red, and the corresponding record-enable button(s) on your ADAT will flash. Here's an example of the Pro Tools Output Destination section, configured to route Pro Tools' outputs 1 and 2 to ADAT tracks 3 and 4, which are record-enabled:



Routing Pro Tools outputs 1 and 2 to ADAT tracks 3 and 4, respectively. ADAT tracks 3 and 4 are also record-enabled.

- Place Pro Tools on-line, and click play and record. Pro Tools's *Play* button will flash, as will the On-line LED on the Digidesign ADAT Interface. When the ADAT has finished cueing up, it will start to record the Pro Tools materials from the insertion point or on-screen selection (if Pro Tools is the Transport master). If your ADAT is the Transport master, Pro Tools will sync to the ADAT, which will record from its current location.

IMPORTANT

The level meters in Pro Tools indicate the level of the individual tracks on disk, but not the output level. So, if you route more than one Pro Tools track to the same Pro Tools output/ADAT tracks, you will need to keep an eye on the level meters on your ADAT to make sure the recording does not distort. You can use master or submaster faders for your output mixers with Pro Tools III or TDM-equipped Pro Tools 442 (I-series) equipment to easily monitor and adjust output mix levels to the ADAT. See your Pro Tools III or TDM Starter Kit User's Guides for instructions for use of master and submaster faders.

To stop the recording:

- Click the *Stop* button in Pro Tools, or hit the Space bar on your keyboard.

Recording from Pro Tools Analog Inputs to an ADAT

Depending on your setup, you may find it convenient to record directly onto an ADAT from audio sources that are connected to your Pro Tools Audio Interface. For example, if you have an 888 I/O-equipped Pro Tools III system, you may wish to take advantage of the extremely high-performance characteristics of the 888 I/O's Analog-to-Digital Converters. This section will show you how to do this. (Refer also to Chapter E *Mixing* for more information on mixing.) The instructions that follow describe recording to your ADAT *only* (i.e., merely routing audio through Pro Tools, but not recording to disk).

To record onto ADAT tracks from Pro Tools analog inputs:

- Connect an audio source into one of the input jacks on the back of your audio interface.
- If you have more than one ADAT, use the *Current ADAT* pop-up in the ADAT window to choose the ADAT you wish to record to.
- If you wish, forward or rewind your ADAT to the point where you'd like to start the recording.
- In the ADAT Window, use the *Pro Tools Output Destination* buttons to route Pro Tools outputs to ADAT Tracks as described previously.
- Record-enable the ADAT destination tracks you wish to record to. Make sure that those same ADAT tracks are not configured as Pro Tools Input Sources or a feedback loop will occur.
- In the Mix Window, create *Audio Tracks* or *Auxiliary Inputs* to correspond to each channel(s) of analog source audio, then set their output destination appropriately to match your settings in the ADAT Window.
- In non-TDM systems, record-enable the Pro Tools tracks you just created to route audio to your ADAT. In TDM-equipped systems, consider using master or submaster faders for output mixers to control your levels going to tape.
- Make sure *Transport=ADAT* is selected, and press *Record* and *Play* in Pro Tools' Transport window (or press the Record and Play buttons on your ADAT). Your ADAT will start recording.

Your analog source that is connected to your Pro Tools Audio Interface will be recorded to the ADAT. You may stop the recording at any time.

To stop the recording:

- Click the *Stop* button, or press Stop on your ADAT.

Recording onto ADAT tracks from Pro Tools digital inputs

You can record to ADAT tracks from Pro Tools digital inputs just as easily as when using the analog inputs.

To record onto ADAT tracks from Pro Tools digital inputs:

- Connect an audio source into any of the digital input ports on the back of your audio interface (up to 8 channels of AES/EBU if you are using the 888 I/O, 2 channels S/PDIF using the 882 I/O, or 2 channels of AES/EBU or S/PDIF using the 442 I/O).
- In the ADAT Window, set the Clock Master to *audio interface*.
- In the Hardware Setup dialog, set the Sync Mode to *Digital* and configure the Ch 1-2 Input to *Digital*. If you have the 888 I/O selected as your Interface, use the *Other Options* button to configure the input format of each pair of 888 I/O input channels.
- Route audio outputs as described in the previous section.
- Return to the ADAT Window and configure the *Current ADAT* pop-up as necessary. The remaining steps are identical whether recording from analog or digital inputs, as described in the previous section *Recording from Pro Tools Audio Interface Analog Inputs to an ADAT*.

Note: Refer to the READ ME document for important information regarding the Reset ADAT Interface *application — using it may be necessary after recording from DAT or other external digital source.*

Conclusion

This concludes the chapter on recording. Proceed to the next chapter to learn more about synchronized playback and mixing of Pro Tools and ADAT tracks using your Digidesign ADAT Interface.

Chapter E
Synchronized Playback and Mixing

Synchronized Playback and Mixing with Pro Tools III or TDM-equipped Pro Tools 442 (I-series) systems

Introduction

In this chapter you'll learn how to synchronize playback to mix Pro Tools disk tracks and ADAT tracks in the Pro Tools III/TDM digital mixing and DSP Plug-In environment. This ability is one of the most powerful ways to put your ADAT Interface to work, as it lets you integrate disk- and tape-based digital audio together in a single mixing and processing environment, while staying in the digital domain. Audio from your ADAT appears alongside disk-based Pro Tools tracks, and can be automated with Pro Tools' level and pan automation, processed with TDM Plug-Ins and bussed to submasters or master outputs for maximum-fidelity, all-digital mixes.

Before you start on this chapter you should already have a thorough understanding of Pro Tools III/TDM conventions and techniques. If you do not already understand how to use Pro Tools' auxiliary inputs, automation or bussing, refer to your *Pro Tools III* or *TDM Starter Kit User's Guide*. All Digidesign manuals have comprehensive indexes (at the back), so use the index to locate any information you need.

This chapter will show you how to integrate ADAT tracks into a Pro Tools III/TDM Session. Specifically, it contains explanations of the following concepts:

- Synchronized Playback
- Mixing ADAT tracks, Pro Tools tracks, and/or live inputs with TDM

Synchronized Playback

When you record from your ADAT to Pro Tools or from Pro Tools to an ADAT with the Digidesign ADAT Interface your recordings are sample accurate. This means that your recordings are identical to the original sources, sample for sample, and when played back in sync will play back phase-synchronously.

Likewise, any synchronized playback between Pro Tools and up to 16 ADATs will remain sample accurate when recording through the analog inputs of Pro Tools or your ADAT.

Note: If you apply a TDM Plug-in to an ADAT track which you have transferred to Pro Tools, the Plug-In will introduce a slight amount of delay. These delays, which can vary from as short as several microseconds to as long as several milliseconds depending on the type of processing being performed, will cause the disk-based track to be delayed slightly from ADAT tape tracks. To ensure that signals remain phase coherent, use the same type of DSP process (the same Plug-In, for example) on both channels — using the Bypass function on the channel that you don't wish to actually process.

Note: When synchronizing playback between Pro Tools and your ADAT with Pro Tools the Transport Master, the ADAT will always cue up with respect to the play-point in Pro Tools (minus Pro Tools' ADAT pre-roll setting). For example, if the play-point is at the beginning of the session, synchronized playback will start the ADAT at time zero minus the value of the Tape Offset. If you have made a selection in the Edit Window with the Waveform Selector, playback will begin and end with respect to that selection. The default pre-roll is set to 3 seconds, as the ADAT requires a minimum of 3 seconds of pre-roll in order to sync properly to Pro Tools.

To synchronize play back between Pro Tools and your ADAT:

- Insert the tape you wish to play into your ADAT.
- If the material on the ADAT does not start at the beginning of the tape, use the *Offset* button of Pro Tools' ADAT window to enter the start time of the material (you can use the *Capture* button to copy the current ADAT time into the Offset field).
- Make sure the *Online* button is highlighted (on). The yellow *Online* LED on your Digidesign ADAT Interface should be illuminated.
- If desired, set the playback cursor in Pro Tools to a desired start point

- Click the *Play* button in Pro Tools, or hit the Space bar on your keyboard. Pro Tools and your ADAT will cue up to and begin synchronized playback.

To stop playback manually:

- Click the *Stop* button in Pro Tools, or hit the Space bar on your keyboard.

Mixing ADAT and Pro Tools tracks with TDM

In addition to letting you transfer audio back and forth between Pro Tools and ADAT, the Digidesign ADAT Interface allows you to take advantage of the all-digital Pro Tools III/TDM mixing environment in which you can route, automate, and process Pro Tools tracks and 8 "live" off-tape ADAT tracks (from one ADAT). This chapter will show you how to set up your Pro Tools III/TDM/ADAT system for mixing.

Overview

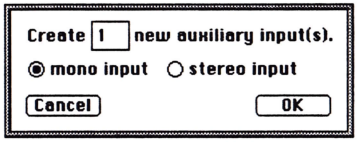
The basic steps to follow when integrating ADAT tracks and Pro Tools tracks under TDM are:

- Create *Auxiliary Inputs* in Pro Tools for your ADAT tracks
- Route the ADAT tracks to the Pro Tools inputs using the *Pro Tools Input Source* buttons of the *ADAT Window*
- Configure the inputs of each Auxiliary Input track using the *Channel Input Selectors* pop-up menu.
- Once you have routed each ADAT track in this manner, you can then apply level and pan automation to the auxiliary inputs, automating your ADAT tracks
- You can bus any combination of Pro Tools/ADAT tracks to I/O destinations and/or DSP Plug-Ins or analog processors to take full advantage of your system's capabilities.

To mix ADAT and Pro Tools tracks with TDM:

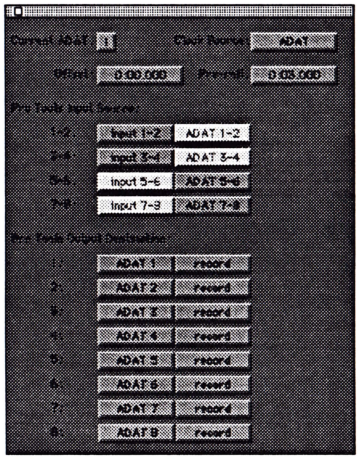
- Configure your Session and ADAT parameters as described in Chapter C (i.e., *Clock Master, ADAT Offset, ADAT Pre-roll, Current ADAT*).

- Create mono or stereo Auxiliary Inputs in Pro Tools for the ADAT tracks you want to mix using the *New Auxiliary Inputs* command of the File menu:



Creating auxiliary inputs for each ADAT track

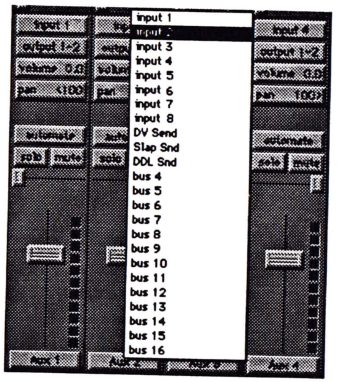
- Open the *ADAT Window* and switch the appropriate *Pro Tools Input Source* buttons to *ADAT* pairs. For example, if you were going to integrate ADAT tracks 1 through 4 into Pro Tools III/TDM, you would configure the input source buttons as shown in the following example:



The ADAT Window, configured to route ADAT tracks 1-4 to Pro Tools Inputs 1-4

Note: When routing ADAT tracks to Pro Tools inputs, make sure none of your Pro Tools Output Destinations are set to the same ADAT tracks and record-enabled, or a feedback loop will occur.

- In the Mix window, use the *Channel Input Selectors* of each Auxiliary Input to route the ADAT tracks to them.

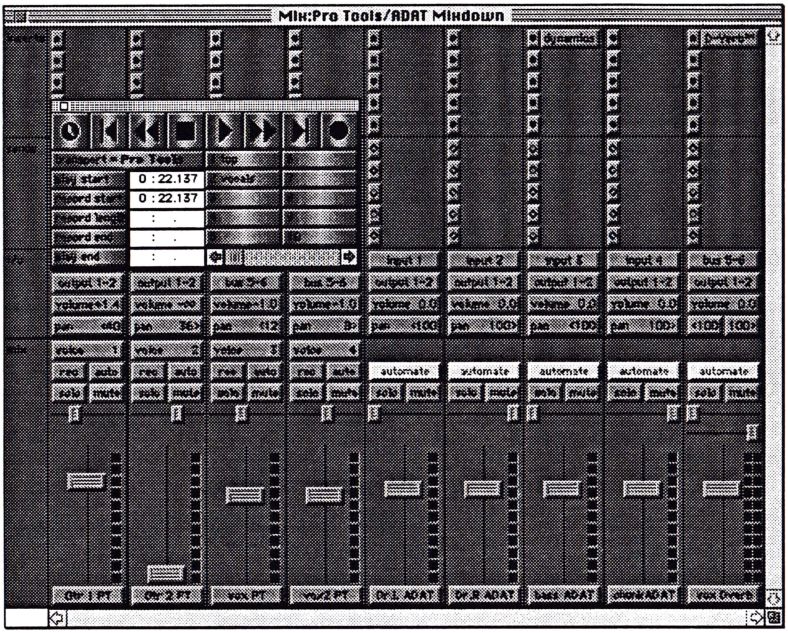


Using the Channel Input Selector to route Pro Tools inputs to Auxiliary input channels

- Put Pro Tools *on-line* and start playback.

Your ADAT and Pro Tools tracks will start playing back in perfect sync. Because you are using auxiliary inputs for your ADAT tracks you can record mix automation and use TDM Plug-Ins for processing.

On the following page is an example of a fairly simple Pro Tools/ADAT session in which basic tracks (stereo drums, mono bass and mono rhythm guitar) are playing back from ADAT to four auxiliary inputs in Pro Tools. Lead guitars and vocals are set up to be recorded into Pro Tools channels 1-4.



A Pro Tools ADAT session with four ADAT tracks and four disk tracks, Plug-Ins and more

This type of allocation of disk tracks and tape tracks takes advantage of the strengths of both Pro Tools and your ADAT, while maximizing efficient use of disk space. MIDI tracks can also be integrated into a Pro Tools/ADAT session for even more possibilities.

About MIDI

Pro Tools' MIDI capabilities are not compromised in any way when you add an ADAT Interface to your system. You can import MIDI files, record, edit and automate MIDI tracks exactly as described in your *Pro Tools III User's Guide*. The only thing you must remember is that your ADAT Interface must be using a dedicated MIDI port — you can not be using the same MIDI port (on a single or multi-port interface) for your ADAT interface and other MIDI communication.

Conclusion

You should now have a good understanding of the techniques for synchronizing and mixing Pro Tools and ADAT tracks using the Digidesign ADAT Interface.

Chapter F
Using the Digidesign ADAT Interface with Digidesign Synchronization Peripherals

Using the Digidesign ADAT Interface with Digidesign Synchronization Peripherals

F

Introduction

In this section you'll learn how to synchronize playback of your ADAT and Pro Tools to an external time code source. Using configurations and techniques you learned in preceding chapters of this manual and in the *Pro Tools User's Guide*, you can use the Digidesign ADAT Interface in conjunction with the Digidesign SMPTE Slave Driver or the Digidesign Video Slave Driver to resolve your ADAT and Pro Tools to external time code.

Before you start on this section you should already have a thorough understanding of using Pro Tools with SMPTE. If you do not already understand how to prepare Pro Tools to work with SMPTE or to put Pro Tools on-line, refer to *Chapter I, Working with SMPTE* in your *Pro Tools User's Guide* for more information.

Note: When synchronizing the ADAT and Pro Tools to external time code, begin playback of your time code source from a section at least 17-20 seconds before the Session start time (or location of your insertion point). This amount of pre-roll time is required for the ADAT and Pro Tools to synchronize their playback and then chase, lock and resolve to incoming time code. An increased pre-roll time will ensure that the ADAT and Pro Tools go into playback or record at exactly the desired point. If your project requires faster locking, you may wish to record your ADAT tracks into your Pro Tools Session and then synchronize your Session (with the ADAT audio on disk) to your external time code source for increased performance.

Overview

The basic steps to follow when preparing the ADAT and Pro Tools to synchronize to an external source are:

- Configure Pro Tools for the Digidesign ADAT Interface, SMPTE Slave Driver, and/or Video Slave Driver in the Peripherals setup.

- Check to see that Pro Tools software and hardware devices are properly configured for the Session's sample rate and SMPTE frame rate.
- Select the appropriate Clock Source (SMPTE Slave Driver or Video Slave Driver, whichever is connected and utilized) in the *ADAT Window*.
- Allow adequate pre-roll time to ensure proper synchronization between playback of your ADAT and Pro Tools with your external source.

To prepare your Pro Tools hardware devices for work on-line:

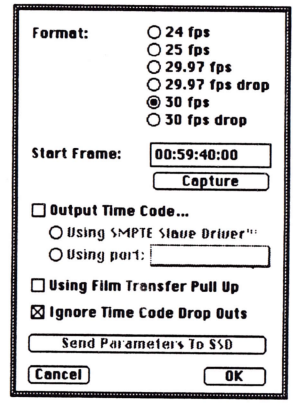
- Configure the Pro Tools hardware and software for a Digidesign Video Slave Driver or SMPTE Slave Driver as described in Chapters B and C of your *Digidesign ADAT Interface User's Guide.*
- If you are using a SMPTE Slave Driver, select the sample rate and SMPTE frame rate to match your Pro Tools Session and make sure the SMPTE Slave Driver is set to *Resolve* mode. You can configure these settings on your SMPTE Slave Driver front panel or by using the *SSD Setup™* software. (Selecting the SMPTE Slave Driver as the Clock Source in the ADAT Window will automatically switch the SMPTE Slave Driver to *Resolve* mode.)

  OR:

  If you are using a Video Slave Driver, select the sample rate on the front panel of the Video Slave Driver to match your Pro Tools Session.
- Select the *Hardware Setup* command from the Setups menu to open the Hardware Setup window.
- In the *Sync Mode* pop-up, choose *Internal* to put the audio interface in internal clock mode.
- In the *Sample Rate* pop-up, choose the appropriate sample rate for the Session. Click *OK* to close this dialog.

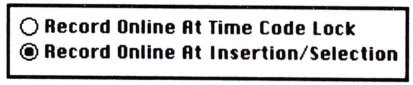
To prepare your Pro Tools software for work on-line:

- Select *Time Code* from the Setups menu to open the Time Code setup window:



The Time Code setup window

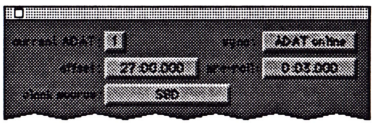
- Select the SMPTE frame format appropriate to your Session.
- If you wish to protect against errors due to time code drop outs, enable the *Ignore Time Code Drop Outs* option in this dialog box. When this option is enabled, Pro Tools will "freewheel" for up to 8 frames over any area of bad time code that it receives while on-line.
- In the Start Frame item in this dialog, type in an appropriate SMPTE frame number. Click *OK* to close this dialog.
- Select the *Preferences* command in the Setup menu to open the Preferences dialog window.
- Choose the *Record On-line At Insertion/Selection* option, so on-line recording begins wherever you have placed the insertion point in a track and then continues until Pro Tools stops receiving time code. If you make a selection in a track, Pro Tools will record on-line only for the length of the selection. (If you choose *Record On line at Time Code Lock,* on-line recording begins as soon as Pro Tools receives and locks to time code—Pro Tools disregards any on-screen selection in this mode.) Clock *OK* to close this dialog.



The Preferences dialog , with the "Record Online At Insertion/Selection" option selected

To configure your ADAT Window settings:

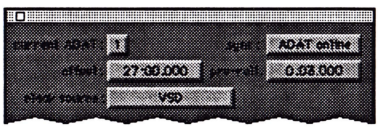
- Select the *Show ADAT Window* command from the Display menu to open the ADAT Window.
- Configure your Session for recording or synchronized playback between the ADAT and Pro Tools as described respectively in Chapters C and D of your *Digidesign ADAT Interface User's Guide.*
- In the *Sync* pop-up, make sure that *ADAT online* is selected. (Choosing *ADAT offline* will allow an ADAT to be taken off-line independently of Pro Tools, so that only your Pro Tools Session will chase and lock to incoming time code.)
- If you are using a SMPTE Slave Driver, choose "SSD" (for SMPTE Slave Driver) in the *Clock Source* pop-up. Pro Tools will automatically configure your SMPTE Slave Driver to *Resolve* mode.



The SMPTE Slave Driver (SSD) as Clock Master

OR:

If you are using a Video Slave Driver, the Clock Source selection in the ADAT Window will remain fixed on "VSD" (for Video Slave Driver).



The Video Slave Driver (VSD) as Clock Master

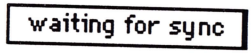
- If the material on the ADAT does not start at the beginning of the tape, use the *Offset* button in Pro Tools' ADAT Window to enter the start time of the material. You can use the *Capture* button to copy the current ADAT time into the Offset field. (The ADAT need not be running in order to capture the current time.)

To synchronize Pro Tools and your ADAT(s) to external time code:

- Set the playback cursor in Pro Tools to a desired start point.

Note: In the Pro Tools Transport window, select Transport=ADAT (press Command-[(Left Bracket) to toggle between Pro Tools and ADAT transport), and cue the ADAT to the beginning of a Pro Tools selection or the current insertion point (press Command-Left Arrow). This will greatly improve the lock up time for synchronized playback of the ADAT and Pro Tools to incoming time code.

- Put Pro Tools *Online*. There are four ways to put Pro Tools in *Online* mode: with the Transport's *Online* button, by choosing the Options menu's *Online* command, by pressing Command - J or by holding down the Option key and pressing the Space bar. Each of these methods toggles the On-line/Off-line status of your Session, and will display the "Waiting for Sync" message in Pro Tools' Status box in the lower left corner of the Edit Window:



When online, the *Online* LED on your Digidesign ADAT Interface will illuminate, and the Transport *Online* button flashes blue. (The *Online* button will continue to flash blue until you hit *Play*, or until Pro Tools and your external time code source achieve lockup.) Pro Tools is now waiting for a assigned start frame to trigger its playback.

- Start playback of your time code source from a section at least 17-20 seconds before the Session start time (or insertion point). Pro Tools and your ADAT will begin synchronized playback and then chase and lock to the external source.

Appendix
Troubleshooting

Appendix: Troubleshooting

The following section provides several suggestions for solving common system problems.

If you see the message "No response from ADAT. Check to make sure all connections are correct" do the following:

- Check to make sure all cable connections are properly made. Refer to Chapter B of your main ADAT Interface user's guide if you need to review the installation instructions.
- Make sure all your equipment is powered on in the *correct order*. You MUST turn on your Pro Tools/ADAT system in the following order: Pro Tools hard drive(s); ADAT(s) (In multiple ADAT systems, the *Master* ADAT should always be powered on first and have its clock set to *Internal* by pressing the *Set Locate* and *Digital In* buttons on the ADAT(s) before powering on the other ADATs); ADAT Interface; Video and SMPTE Slave Drivers (if present); Audio interface(s) (In expanded Pro Tools systems, Audio Interface A should be powered on first, then the others in sequential order); MIDI interfaces or other peripherals; and Macintosh CPU. Launch Pro Tools software after all equipment is powered on. Turn on your power amplifier or sound system last.
- Try reseating the 9-pin sync cable connecting the *Sync Out* of the ADAT Interface to the *Sync In* of the ADAT. If the problem persists, swap the 9-pin sync cable or connect the *Sync Out* of another ADAT to the *Sync In* of your ADAT to confirm that the *Sync In* port is receiving sync.
- Verify that the *4/8* button on the rear panel of the ADAT Interface is correctly selected for your Pro Tools system. For Pro Tools III and expanded (8- or more channels) Pro Tools I-series systems, this button should be *In* (Pushed In). Push the button *Out* and then back *In*. For 4-channel Pro Tools I-series systems, this button should be *Out* (Pushed Out). Push the button *In* and then back *Out*.

- If your are using a multiple ADAT setup for a session, there MUST be a formatted tape in the *Master* ADAT.

- If you are opening a previously created Pro Tools/ADAT Session, check to see if your MIDI and/or OMS setup has changed since the Session was created. Verify the correct port for the ADAT Interface is enabled in the Peripherals setup window and has not been selected for any other MIDI function such as time code, machine control, and metronome.

- Verify that the ADAT Interface is receiving and sending System Exclusive (SysEx) information with the MIDI Interface. The *Online* LED on the ADAT Interface should light momentarily after checking the ADAT Interface and selecting the ADAT port and clicking *OK* in the Peripherals setup. Hitting the Stop button on the ADAT Transport should light the MIDI Input LED on your MIDI Interface. LEDs on your MIDI Interface flash constantly to indicate SysEx communication between the ADAT Interface and computer. If these LEDs do not light up as prescribed, check your MIDI setup for the correct port selections. If you are using OMS, confirm that the ADAT Interface is properly configured as a MIDI Device. (Refer to the *Using the Digidesign ADAT Interface with OMS* section in this manual.)

- Try resetting and operating the MIDI interface at 1 Mhz. If the serial port on your MIDI Interface serial port has a *Thru* feature, make sure it is disabled by setting its *Thru* button to the correct position. (If you are using a Mark of the Unicorn MIDI Time Piece II™, use its front panel "reset" procedure to return the MIDI interface to its original speed and setup.) Then reselect your ADAT port in the Peripherals window. If the problem persists, try another MIDI interface or reseating or replacing the MIDI cables.

- Your Pro Tools' hardware and software preferences have become corrupted. Quit Pro Tools, trash the *DigiSetup* file (and *DigiComm* file, if present) from the System Folder and the *Pro Tools Preferences* from the Preferences Folder (inside the System Folder) and repeat the proper power sequence. After everything's been powered on, launch Pro Tools , then after Pro Tools has finished loading, you will be asked to reselect your Audio Interface in the Hardware Setup window, reselect your ADAT Interface port in the Peripherals setup window, reopen the session and reset the clock source in the ADAT Window.

- If you are using multiple ADATs, strip the system down to one ADAT for troubleshooting.

If the application reports "No Audio Interface Detected" check the following:

- Is your ADAT Interface on? Since the Digidesign ADAT Interface is connected between the computer and your Pro Tools Audio Interface, it is imperative that you turn on your Digidesign ADAT Interface whenever you use Pro Tools. Although it is not required that you *use* your ADAT for every Pro Tools project, your ADAT and ADAT Interface should always be powered ON when using Pro Tools or any other application which uses your Digidesign audio hardware, as the clock signals from the ADAT (and ADAT Interface) are now part of your setup.
- Are you are running the correct version of the Pro Tools software? Version 1.1 of the ADAT Link™ software requires Pro Tools 3.1 software to operate. Make sure you installed the software that came with your Digidesign ADAT Interface.
- Did you properly connect your Digidesign ADAT Interface to your Pro Tools NuBus card(s) and Pro Tools Audio Interface(s)? Check for loose connections and check the 50-pin interface connections from the ADAT Interface to the Computer and from the ADAT Interface to the Peripheral(s). (Power down the computer before you do this!) Refer to Chapter B of your main ADAT Interface user's guide if you need to review the installation instructions.
- Did you follow the proper power up procedure? If you're not sure, refer to the beginning of this chapter.
- Your Pro Tools' hardware and software preferences have become corrupted. Quit Pro Tools, trash the *DigiSetup* file (and *DigiComm* file, if present) from the System Folder and the *Pro Tools Preferences* from the Preferences Folder (inside the System Folder) and repeat the proper power sequence. After everything's been powered on, launch Pro Tools , then after Pro Tools has finished loading, you will be asked to reselect your Audio Interface in the Hardware Setup window, reselect your ADAT Interface port in the Peripherals setup window, reopen the session and reset the clock source in the ADAT Window.

If your MIDI Interface ports don't appear in the ADAT Interface Setup Dialog:

- Check to make sure your MIDI interface is connected to the correct serial port and that serial port is selected in the *Serial Ports* setup.
- If you use OMS, check to make sure you have configured OMS Setup correctly. If Pro Tools is running, changes made in OMS will not appear until *after* you relaunch Pro Tools. Refer to the *Using the Digidesign ADAT Interface with OMS* section in this manual.

If the *Current ADAT* pop-up lists the wrong number of ADATs:

- Confirm that your multiple ADATs are identified correctly. To verify the *ID* number for an ADAT, hold down the *Set Locate* button, press the *Play* button on the ADAT.
- Confirm that you have made proper Sync port connections between ADATs. Check the connections between Sync ports for loose cables, and verify that *In* ports are connected only to *Out* ports, and that there are no connections from *In* to *In* or *Out* to *Out*.
- Are the ADAT Sync ports connected in the proper order? Make sure that the ADAT designated as the *Master* ADAT has its *Sync In* port connected to the *Sync In* port from the Digidesign ADAT Interface. Its *Sync Out* should be connected to *Sync In* of the next ADAT in line. That ADAT's *Sync Out* should be connected to another ADAT, etc. Additionally, make sure that the ADATs are arranged logically, so that ADATs connected to each other are next to each other. Review the *Connecting Multiple ADATs* section in Chapter B in your main *Digidesign ADAT Interface User's Guide*, if necessary.
- Did you follow the proper power up procedure? The *Master* ADAT should always be powered on first and have its clock set to *Internal* by pressing the *Set Locate* and *Digital In* buttons on the ADAT(s) before the other ADATs are powered on. Refer to the beginning of this chapter to review the power up procedure.
- Try re-initializing your *Peripherals* setting for the ADAT Interface. Open Pro Tools *Peripherals* dialog (Setup menu) and deselect ADAT (click to uncheck it) and click OK. Reopen the *Peripherals* dialog and reselect ADAT (click to check it). Click *OK*. If the Digidesign ADAT Interface "lost contact" with any of your ADATs, this will reestablish communication and update the *Current ADAT* pop-up correctly.

If your ADAT won't cue properly to Pro Tools:

- Did you put Pro Tools on-line with your Digidesign ADAT Interface? Verify *ADAT online* has been selected in the Sync pop-up in the ADAT Window, then click the On-line button on the Pro Tools Transport to put Pro Tools on-line with the ADAT Interface. The ADAT Status Display in the lower left-hand corner of the Edit Window should read *Waiting for Sync*.

- Did you properly connect the *Sync Out* port on your ADAT to the *Sync In* port on the Digidesign ADAT Interface. Check for loose connections. If you have more than one ADAT, the *Sync Out* port on the Digidesign ADAT Interface should be connected to the *Sync In* port on the *Master* ADAT, and the *Sync In* on the Digidesign ADAT Interface should be connected to the *Sync Out* port on the *last* ADAT in your chain of ADATs. When on-line playback is engaged in Pro Tools, the ADAT Status Display in the lower left-hand corner of the Edit Window should read *Receiving Sync* as the ADAT cues up to Pro Tools, and then read *In Sync* as both ADAT and Pro Tools play back in sync.

- Did you properly connect the Digidesign ADAT Interface to your MIDI Interface? Check for loose connections and make sure that the MIDI Out ports are connected only to MIDI In ports. Confirm that the *MIDI In* of the Digidesign ADAT Interface is connected to an output of the MIDI Interface. Remember that the Digidesign ADAT Interface must be connected to a MIDI input and a MIDI output port at all times in order for Pro Tools to communicate with your ADAT Interface.

- Did you choose the correct MIDI port in Pro Tools' *Peripherals* dialog? In the Pro Tools software you must select the port of your MIDI Interface that is connected to the Digidesign ADAT Interface. This is particularly important if you have a multi-port MIDI Interface.

- If Pro Tools and your ADAT cue up but do not play in sync right away, try increasing the amount of ADAT pre-roll (via the *ADAT Pre-roll* dialog in Pro Tools' ADAT Window). The pre-roll should be 3 seconds or greater. A pre-roll of zero may result in unstable sync.

If the ADAT or Pro Tools are playing back at the wrong speed or if you are hearing loud digital noise:

- Did you install the Pro Tools cards in the correct slot order? In order for Pro Tools to properly "clock" the data throughout the system, the cards must be installed in the order in your *Pro Tools 3.1 User's Guide Addendum.*

- Did you properly connect the *Slave Clock* ports on the Digidesign ADAT Interface to your Pro Tools Audio Interface? Check for loose cable connections, and make sure that the *In* ports are connected only to *Out* ports. Refer to Chapter B, *Installing your Digidesign ADAT Interface Hardware and Software* to review the clock connections for your Pro Tools configuration.

- Did you remember to switch Pro Tools to *Internal* sync mode in the Hardware Setup window? No matter which Pro Tools configuration you have, the clock source should always be set to *Internal* unless you are recording from a DAT machine, or other device that outputs clock via S/PDIF. If you are not recording from a digital source such as a DAT machine, there is no reason to ever set the clock to *Digital.*

- Did you select the correct Clock Source in the ADAT Window? This should be set to *ADAT* for most Pro Tools/ADAT sessions. Choose *Audio Interface* only if recording into Pro Tools from the AES/EBU or S/PDIF digital inputs of your Audio Interface (you'll need to do this when recording from a DAT deck or other digital source). If you have a SMPTE Slave Driver, choose *SSD* to resolve the ADAT and Pro Tools to external time code and clock source. If you *do not* have a SMPTE Slave Driver, *do not* choose *SSD.*

- Did you remember to switch the ADAT Clock to *Internal* mode? No matter which Pro Tools configuration you have, the clock source of your ADAT should always be set to *Internal.* Review the power up procedure if you are unsure. If you have more than one ADAT, it is only necessary to set the clock on the *Master* ADAT.

- If you have a Digidesign Video Slave Driver connected to your Pro Tools system, you must have it powered on and selected in the Peripherals setup window. If you did not do this, you must apply the proper power up procedure, then relaunch Pro Tools (but do not yet open a session), check the Video Slave Driver and its port setting in the Peripherals setup window and click OK, then reopen your session and confirm *VSD* is selected as the Clock Source in the ADAT Window.

- If you have a Digidesign SMPTE Slave Driver connected to your Pro Tools system, you must have it powered on and selected in the Peripherals setup window. If you did not do this, you must apply the proper power up procedure, then relaunch Pro Tools (but do not yet open a session), check the Video or SMPTE Slave Driver and its port setting in the Peripherals setup window and click OK, and then reopen your session. If you are receiving to an external time code source, set *SSD* as the Clock Source in the ADAT Window and set SMPTE Slave Driver to *Resolve* mode. If you are selecting the ADAT or Audio Interface as the Clock Source, the SMPTE Slave Driver should automatically be set to *Generate from Slave* mode.

- Because of the crucial clock information being transmitted between the devices, the BNC cables used for Slave Clock connections should be as short as

possible. If you need BNC cables longer than the ones included with your ADAT Interface Accessory Kit (or Video or SMPTE Slave Driver), use cables with the minimum length possible. Slave Clock cable lengths of a foot or shorter generally work best.

- Verify the ADAT port has not been selected for any other MIDI function such as time code, machine control, and metronome. The System Exclusive (SysEx) stream between the ADAT Interface and Pro Tools should never be merged or interrupted with any other MIDI transmission.
- Your Pro Tools' hardware and software preferences have become corrupted. Quit Pro Tools, trash the *DigiSetup* file (and *DigiComm* file, if present) from the System Folder and the *Pro Tools Preferences* from the Preferences Folder (inside the System Folder) and repeat the proper power sequence. After everything's been powered on, launch Pro Tools , then after Pro Tools has finished loading, you will be asked to reselect your Audio Interface in the Hardware Setup window, reselect your ADAT Interface port in the Peripherals setup window, reopen the session and reset the clock source in the ADAT Window.

If the transport functions on the ADAT do not work:

- The ADAT may not be properly referencing a clock source. Verify the slave clock cable connections between the ADAT, ADAT Interface and audio interface(s) are properly configured. Power everything down, reseat all the cables, and then use the proper power up outlined in the beginning of this Troubleshooting section.

If the ADAT plays through the pre-roll, but both ADAT and Pro Tools stop 1-3 seconds after the insertion point during online playback or record:

- Try reseating the 9-pin sync cable connecting the *Sync Out* of the ADAT to the *Sync In* of the ADAT Interface. If the problem persists, swap the 9-pin sync cable connect the *Sync Out* of your ADAT to the *Sync In* of another ADAT to confirm that the *Sync Out* port is outputting sync.

If the ADAT fails to record from Pro Tools and instead plays past the start time, even though signal is present on the ADAT's Input meters:

- Check Pre-Roll in the ADAT Window and confirm that it is not set to 00:00:000. Set it to 3 seconds or greater, and try the recording again.

- After record-enabling your ADAT tracks, make sure *Transport=ADAT* is selected, and press Record and then Play in Pro Tools' Transport window. Pressing Play in the same transport in which the ADAT was record-enabled properly completes the record command. If you press Record in Pro Tools' Transport window and then press Play on the ADAT, the ADAT will go into Record Safety mode. It will allow you to monitor the input of the ADAT's record-enabled tracks and the output of other tracks, so you can practice your record take, but the ADAT will not record the take.

If recording from DAT or another digital source into Pro Tools produces no audio or distorted audio:

- Did you remember to switch Pro Tools to *Digital* sync mode and *Digital* inputs for channels 1-2 in the Hardware Setup window?
- Confirm *Audio Interface* (or *VSD,* if using a Video Slave Driver) is chosen in the Clock Source pop-up and *Input 1-2* (not *ADAT 1-2*) is chosen for the Pro Tools Input Source in the ADAT Window. (If you have the Digidesign Video Slave Driver checked in the Peripherals setup window, your Clock Source will automatically read *VSD* and is not changeable.)
- Did you follow the proper power up procedure? Refer to the beginning of this chapter to review the power up procedure.
- Your Pro Tools' hardware and software preferences have become corrupted. Quit Pro Tools, trash the *DigiSetup* file (and *DigiComm* file, if present) from the System Folder and the *Pro Tools Preferences* from the Preferences Folder (inside the System Folder) and repeat the proper power sequence. After everything's been powered on, launch Pro Tools , then after Pro Tools has finished loading, you will be asked to reselect your Audio Interface in the Hardware Setup window, reselect your ADAT Interface port in the Peripherals setup window, reopen the session and reset the clock source in the ADAT Window.

If Pro Tools fails to input audio from the ADAT, or vice versa:

- Did you correctly configure the track routing in the ADAT Window? Are your destination tracks record-enabled? (If you are recording from ADAT into Pro Tools, are voices available for the recording. If not, try routing ADAT tracks to Pro Tools Auxiliary Inputs.)
- Verify the audio on the ADAT or Pro Tools track by checking meter levels and

monitoring the direct outputs of the ADAT or Pro Tools.

- Confirm the fiber optic cables are properly connected from the ADAT to the ADAT Interface. *Optical Out* from the ADAT should be connected to *Optical In* on the ADAT Interface, and *Optical Out* from the ADAT Interface should be connected to *Optical In* on the ADAT. Also, the fiber optic cables are very delicate, and can fail to work if stretched, bent, or creased. If possible, try recording from your ADAT to another ADAT (and vice versa) using the ADAT fiber optic cables to verify you ADAT can reliably input and output signals.
- Did you properly connect your Digidesign ADAT Interface to your Pro Tools NuBus card(s) and Pro Tools Audio Interface(s)? Check for loose connections and check the 50-pin interface connections from the ADAT Interface to the Computer and from the ADAT Interface to the Peripheral(s). (Power down the computer before you do this!) Refer to Chapter B of your main ADAT Interface user's guide if you need to review the installation instructions.

When using the Video or SMPTE Slave Driver, if Pro Tools and the ADAT are drifting out of sync from the external time code or clock source:

- Did you install the Pro Tools cards in the correct slot order? In order for Pro Tools to properly "clock" the data throughout the system, the cards must be installed in the order explained in your *Pro Tools 3.1 User's Guide Addendum.*
- Did you remember to switch Pro Tools to *Internal* sync mode in the Hardware Setup window? No matter which Pro Tools configuration you have, the clock source should always be set to *Internal* unless you are recording from a DAT machine, or other device that outputs clock via S/PDIF. If you are not recording from a digital source such as a DAT machine, there is no reason to ever set the clock to *Digital.*
- Did you remember to set the sample rate of your Video and/or SMPTE Slave Driver to match the sample rate of your Pro Tools Session?
- Try playing your time code source from a section 17-20 seconds before the session start time (or insertion point), since the ADAT and Pro Tools require that amount of time to synchronize playback and then chase and lock to the external time code source.
- Did you remember to choose *SSD* to resolve the ADAT and Pro Tools to external time code and clock source? Also, confirm the *Ext. Sync Select* switch is set to 256x on the back panel of the SMPTE Slave Driver.

- Did you configure the slave clock connections between the devices as outlined in the *Configuring the Digidesign ADAT Interface for use with the SMPTE and Video Slave Drivers* section at the beginning of this manual? Confirm the cables are oriented correctly and securely seated. If you can pull on the BNC cable and release the connector from the jack, it is not locked in place. If the BNC cable connector is not locked, the connection will be unreliable and your Digidesign ADAT Interface will not function properly.

If All Else Fails

If you think you've tried everything and you still can't get your system to work properly, call Digidesign Technical Support at one of the numbers listed at the front of this User's Guide. Be sure to mention that you are using the Digidesign ADAT Interface with Pro Tools. The Digidesign Technical Support team will do everything they can to help you get up and running.

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